Health Services
LOS ANGELES COUNTY

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

23 November 27, 2012

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313 N. Figueroa Street, Suite 912
Los Angeles, CA 90012

Tel: (213)240-8101
Fax: (213) 481-0503

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To ensure access to high-quality, patient-centered, cost-effective health care to Los Angeles County residents through direct services at DHS facilities and through collaboration with community and university partners.

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November 20, 2012

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

APPROVAL OF AN ELECTRONIC HEALTH RECORD SYSTEM AGREEMENT WITH CERNER CORPORATION, AND REQUEST FOR HIRING AUTHORITY
(ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)

CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ( )
DISAPPROVE ( )

SUBJECT

Approval of (i) a new Agreement with Cerner Corporation for the provision of an Electronic Health Record System for the Department of Health Services, (ii) delegation of authority to the Director of the Department of Health Services to amend the Agreement, and (iii) approval to fill 55 new Full-Time Equivalent positions.

IT IS RECOMMENDED THAT THE BOARD:

1. Delegate authority to the Director of the Department of Health Services (DHS) or his designee to execute an Agreement substantially similar to Exhibit I, with Cerner Corporation, effective December 21, 2012, through December 31, 2022, for the provision of an Electronic Health Record (EHR) System with a provision for five, one year automatic extensions, in the County's discretion, through December 31, 2027, with a Maximum Contract Sum not to exceed $366,990,594, including the extension periods, with the Maximum Contract Sum comprised of: (i) Contract Elements of $272,482,095 ; (ii) Optional

Work/Pool Dollars of $55,912,701 with Optional Work/Pool Dollars expenditures to be authorized by the Director through the issuance of Change Orders; and, (iii) Additional EHR Capabilities of $38,595,798, which the County may acquire through a formal, Board approved amendment.

2. Delegate authority to the Director of Health Services (Director), or his designee, to (i) approve and execute Change Notices to the Agreement that do not require any additional costs or expenses or that do not affect any term or condition of the Agreement; and (ii) approve and execute Change Orders using Pool Dollars included as part of the Contract Sum for the acquisition of Optional Work, and provided the amounts payable under such Change Orders do not exceed the available amount of Pool Dollars.

3. Delegate authority to the Director, or designee, to amend the Agreement to (i) add or change terms and conditions as required by the Board; (ii) issue written notice(s) of partial or total termination of the Agreement for convenience without further action by the Board of Supervisors; (iii) prepare and execute Amendment(s) to the Agreement which may reduce the Services and the Contract Sum, subject to review and approval by County Counsel and the Chief Information Office (CIO), and with notification to the Board and Chief Executive Office (CEO); and/or (iv) prepare and execute Amendments to the Agreement to provide a limited Cost of Living Adjustment (COLA) in the extension periods, after December 31, 2022, in accordance with the terms of the Agreement and as further described in the Agreement Pricing section below.

4. Authorize DHS to fill up to 55 new Full-Time Equivalent (FTE) positions at DHS Health Services Administration, as shown on Attachment A and in excess of what is provided in the DHS staffing ordinance pursuant to Section 6.06.020 of the County Code, subject to allocation by the CEO.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The DHS EHR project is motivated by the fact that (1) a modern, integrated EHR is required if DHS is to be able to provide high-quality health care to residents of Los Angeles County, attract qualified healthcare providers and trainees, and fulfill requirements of "meaningful use" and Health Care Reform; and (2) the existing clinical system is at its end of life and is not Certified EHR Technology required to comply with Federal care delivery requirements and receive Federal Eligible Professional and Hospital incentive payments.

The vision for the DHS EHR project is to procure, deploy, and sustain a uniform, standardized and fully integrated EHR solution that is implemented consistently across care settings, with standardized associated workflow processes and a single, unified data structure. DHS intends to move from an outdated, silo approach to health information management to a modern, uniform, industry standard approach.

Finally, the goals of the EHR project include improving the quality and documentation of care, improving the coordination and efficiency of care across DHS facilities, and meeting requirements for meaningful use and incentive payments.

Approval of the first recommendation will allow execution of an Agreement with Cerner Corporation, substantially similar to Exhibit I, to provide an EHR System at DHS. The Agreement will provide for

ongoing maintenance and support services, hosting services, application management and professional services.

Approval of the second and third recommendations will allow the Director to issue Change Notices that do not authorize additional costs; issue Change Orders to purchase Optional Work using available Pool Dollars included in the Contract Sum; terminate the Agreement in full or part for convenience; and, amend the Agreement to reduce services and the Contract Sum, to add or change terms and conditions as required by the Board; and amend the Agreement to provide a limited COLA in the extension periods, after the initial term ends on December 31, 2022, in accordance with the terms of the Agreement and as further described in the Agreement Pricing discussion below.

Approval of the fourth recommendation will enable DHS to initiate actions to fill 55 FTE positions to implement and deploy the EHR under a centralized EHR division, which is to be established under the DHS Chief Information Office.

DHS will return to the Board before the effective date of the Agreement, December 21, 2012, to request approval for a Fiscal Year (FY) 2012-13 budget adjustment to increase appropriation authority and revenue to recognize the financing for the first year only of the total EHR cost. The budget adjustment will be for Cerner contract initiation and first year contract cost, funding for the 55 new FTE positions requested in the fourth recommendation, funding for subject matter experts, County infrastructure requirements to support EHR (including Capital Projects), County Pool Dollars, and a forthcoming consulting services agreement for assistance with EHR implementation.

Background of the EHR System Solution and Acquisition

The recommended Agreement is the culmination of several years of planning within DHS. Long before DHS released its Request for Proposals (RFP) on November 15, 2011, it created a provider led structure to provide leadership and direction for the EHR program. The core mission of this provider led structure was to identify key barriers to the success of an EHR System and develop a "roadmap" for the program to address these barriers. These efforts led DHS to develop and approve its EHR Strategy, including the release of the RFP.

A set of principles underlies both the DHS EHR strategy and the acquisition of the EHR System. These principles are: (1) DHS clinicians will use the EHR System as the primary mode of documentation of patient care; (2) DHS clinicians will use the EHR System to create all patient care orders online; (3) the EHR System will enable DHS to achieve compliance with reporting the quality measures and on-line activities required by the federal government, including enabling DHS hospitals and DHS eligible professionals to achieve "meaningful use" as required by Federal law; (4) the EHR System will enable charge capture for professional services and for facility services; (5) external paper documents relevant to patient care will be scanned and will be available as needed to providers through the EHR System; and (6) the EHR System will support the delivery of continuity of care across care venues in DHS facilities as well as across and between disciplines.

Scope of the EHR Solution

The EHR System will facilitate the transformation of the DHS system of care. It will integrate support across care settings, including the DHS in-patient facilities, outpatient departments and clinics, emergency departments, operating rooms, and ICUs.

This EHR System will permit the sharing of patient information across the DHS system and access to

comprehensive patient information to facilitate continuity of care within and between DHS sites. It will assist in the improvement of patient safety by: (1) capturing high quality patient data to support care decisions, research, analytics, and quality improvement; and (2) enabling DHS to provide a consistent patient experience across the DHS organization, permit the enterprise-wide sharing of best practices as well as enhance efficiency and effectiveness when implementing work flows, new rules, protocols and guidelines from both clinical and information technology perspectives.

The EHR System provides a wide range of functions, including: (1) on-line clinical documentation by care providers; (2) electronic order entry for care delivery orders; (3) medical coding for documentation; (4) decision support for documentation and electronic order entry; (5) integration of ancillary systems such as Pharmacy, Laboratory, and Radiology; and (6) management of the admission, discharge, and transfer cycle, including patient scheduling, registration and a Master Patient Index.

The EHR System

The EHR System will replace the current DHS health information system (QuadraMed/ "Affinity"), and a number of independently operating, "niche" systems in DHS, including ORSOS, Wellscripts, Allscripts and Sunquest. The EHR system will not replace the following: (1) QuadraMed Patient Accounting; (2) Fuji PACS Radiology; and (3) the DHS Outpatient Pharmacy system, which is now linked to the Cardinal Central Fill initiative previously approved by the Board. All of these separate “niche” systems will interface with the EHR System.

Finally, the EHR System will enable the exchange of health information, including clinical, administrative, outcome and encounter (e.g., payor and eligibility coverage) information at the patient and community-wide levels. DHS is committed to the exchange of information to further the patient care goals that it shares with its Safety Net providers, and the EHR System will enable DHS to achieve those goals by linking to Los Angeles Network for Enhanced Services (LANES), the local Health Information Exchange project involving the County and many of its Safety Net providers.

Design, Test and Build: Cluster Self-Assessment and Implementation

The DHS system-wide design, build, and testing phase is projected to be completed within 18 months after the Agreement's execution. Thereafter, implementation will occur at each of six DHS clusters, with "clusters" defined as they are for Affinity purposes. Therefore, any cluster which includes a hospital automatically will include its outpatient departments, health clinics and comprehensive health centers. Attachment B is a diagram of the DHS Affinity clusters. DHS expects implementation at all clusters to be completed in the Summer of 2016.

Cerner and DHS will deploy separate inpatient and outpatient implementation teams. DHS and Cerner plan to keep the inpatient and ambulatory teams generally "in sync" or working within the same cluster when there is both inpatient and ambulatory implementation work to be done in that cluster. However, having separate teams will enable the ambulatory team to move on to the "ambulatory-only" clusters if they complete the ambulatory work before the inpatient work is completed in a cluster. DHS anticipates that this will happen and thus may allow the High Desert and MLK MACCs, the only "ambulatory only" facilities, to have their implementations moved up on the EHR implementation schedule.

In arriving at the implementation order, DHS administration focused on maximizing opportunities for an overall successful implementation, keeping the project on schedule, and obtaining concurrence among the facilities as to implementation order. Using a self-assessment developed by DHS administration, the facilities" Chief Information Officers and Chief Medical Information Officers

assessed their individual facilities for EHR System implementation readiness using a variety of factors. That order is shown in Attachment C.

Implementation of Strategic Plan Goals

The recommended actions support Goal 1- Operation Effectiveness; Goal 2 – Fiscal Sustainability; and Goal 3 – Integrated Services Delivery of the County's Strategic Plan.

FISCAL IMPACT/FINANCING

General Financing Plan

DHS and the CEO are recommending that the initial development of the EHR System be financed through the issuance of commercial paper. During this initial development period, DHS would be responsible for annual interest payments using DHS existing resources. Upon completion and implementation of the EHR System at the first three DHS clusters, which is anticipated by the end of FY 2014-15, any outstanding commercial paper will be redeemed through the issuance of lease revenue bonds with a final maturity of ten years. Commercial paper would continue to be issued to finance the development and completion of the EHR System at the final three DHS clusters. Upon completion of this final project phase, which is anticipated in the Summer of 2016, a second series of ten-year lease revenue bonds would be issued to redeem the outstanding commercial paper.

The CEO and Treasurer Tax Collector will return to the Board with final recommendations regarding the proposed issuance of commercial paper and lease revenue bonds later in FY 2012-13.

DHS is setting aside in current and future budgets an amount sufficient to fund the payment of principal and interest due on the two series of long-term bonds. The annual set-aside would consist of EHR incentive payments, as more fully discussed below, existing resources, Waiver funds, and increased revenue from Health Care Reform.

Hospital & Eligible Professionals Incentive Payments

The federal government created Medicare and Medicaid incentive payments under the HITECH Act to promote the adoption and "meaningful use" of Certified EHR technology by hospitals and "Eligible Professionals" (EPs).

Hospitals may receive both Medicare and Medicaid incentive payments, assuming they meet the eligibility criteria for both programs. However, EPs must elect to pursue either a Medicare or Medicaid incentive. The maximum available Medicare incentive payment is anticipated to be $44,000 over a five-year period per individual EP, but that amount decreases depending on when, over the five-year period, the EP actually qualifies for the payment. The available Medicaid incentive payment is anticipated to be $63,750 over a six-year period per individual EP, making that incentive the better option and the one which DHS has decided to pursue.

For purposes of Medicaid incentives for EPs, "eligible professionals" are physicians, including licensed residents, optometrists, dentists, certified nurse midwives, nurse practitioners and physician assistants, who practice in Federally Qualified Health Centers. EPs must not be hospital based, must satisfy specified Medicaid patient volume requirements, and must demonstrate the meaningful

use of EHR technology at specific points in time in order to qualify for and receive incentive payments under the Federal statutory scheme.

Under the Federal law, EHR incentive payments are to be paid directly to the individual EPs and not to their employer unless the EP assigns the payment to the employer. With respect to those EPs who are under contract, DHS must have an assignment agreement in place or negotiated, which agreement provides for the payment of such funds to the County. Only then can the County gain access to those funds. The assignment agreement either may be incorporated into existing agreements or executed independently of existing agreements.

DHS is pursuing available EHR incentive payments for Hospitals under both Medicare and Medi-Cal, and for its EPs under Medi-Cal, to offset the costs of building the EHR System. The first potential Medi-Cal EHR incentive payment will become available upon execution of the recommended Agreement.

At this time, DHS is estimating approximately $100 million in incentive payments over the period of calendar year 2013 through 2021, subject to the assignment of EP incentive payments to the County and subsequent meaningful use stages. DHS estimates that its hospitals will receive approximately $39.1 million in Medi-Cal incentive payments and approximately $2.5 million in Medicare incentive payments, for a total of $41.6 million, over nine years. DHS also estimates that it will receive approximately $58.4 million in incentive payments from its EPs (both employed and under contract) who are anticipated to agree to reassign their incentive payments to the County.

Before the end of the calendar year, the CEO anticipates bringing forth the required amendment to the Memorandum of Understanding (MOU) between the County and the Union of American Physicians and Dentists (UAPD) to enable the County to obtain the assignment of incentive payments from the DHS represented physician and dentists. This MOU amendment culminates several months of negotiations with UAPD. Further, the CEO currently is negotiating with the appropriate bargaining units within SEIU concerning the assignment of incentive payments by nurse practitioners and nurse midwives. Finally, DHS anticipates returning to the Board by the end of the calendar year with requests for authority to amend DHS's various agreements with its contracted physician, dental and nurse practitioners for the assignment of their incentives.

Agreement Pricing

The Agreement's pricing is predominately fixed price, with price adjustment being limited to specific categories, such as expanded use of the EHR System by DHS and the election of Optional Work. This pricing model provides significant predictability and control over potential cost changes in the Agreement's pricing both during the implementation and in outlying years. Implementation and software payments are tied to Cerner achieving defined milestones in EHR implementation.

The Agreement's pricing includes all license costs of the software and its implementation at all six Affinity clusters, including interfaces and training costs; all hosting costs; and the costs of developing order scripts, clinical documentation templates, and all ongoing maintenance and support costs. Cerner's travel costs for the implementation are fixed and included in the Contract Sum, with payment for additional travel being limited to DHS-initiated requests for additional services or a DHS-initiated changes to the location of the delivery of the services. Travel costs are tied to, and will not exceed, the amounts allowed under County Auditor-Controller's policy. The Contract Sum includes Pool Dollars, which are available for Optional Work, including additional professional services, the purchase of new software licenses and new content, and payment for use reconciliations as described below. Cerner’s pricing for new software licenses and new content are fixed for the first

five years of the Agreement. Finally, it should be noted that the Contract Sum also includes Additional EHR Capabilities which the County may purchase in future years through a Board approved Amendment. Because of the nature of the financing supporting the EHR System acquisition, the inclusion of these costs in the Contract Sum from the Agreement's inception was necessary,

In the event that DHS grows in size over the Agreement's term, either through the addition of a new hospital or free-standing outpatient clinics, the pricing in the Agreement will extend to those new facilities according to a pre-established pricing formula. In the event of a physical growth event, DHS will return to the Board for approval of an amendment to the Agreement to increase the Contract Sum.

The maximum Contract Sum will not exceed $366,990,594. The Agreement has the following pricing components, as reflected on the Cash Flow Summary shown in Attachment D:

(1) Contract Elements: These costs are comprised of Licensed Software, implementation services and training, hardware and third party software, support, clinical content, remote hosting, Application Management Services, Third Party Products, and estimated taxes. These costs will not exceed $272,482,095.

(2) Optional Work: These costs are included in the Contract Sum as Pool Dollars, and DHS may purchase this work through the issuance of a Change Order pursuant to authority requested to be delegated by the Board and stated in the Agreement. Expenditures for Optional Work will not exceed $55,912,701. Optional Work includes new software, content, Professional Services, and Training and a "use reconciliation" process that is intended to capture additional Cerner costs that may arise through DHS's expanded use or consumption of the EHR System. The use reconciliation will be done using a baseline and metrics in the Agreement and will occur, if necessary, after the 5th, 7th and 10th contract years. Any needed use reconciliation will result in an incremental fee increase, which fee is established in the Agreement.

(3) Additional EHR Capabilities: These costs are included in the Contract Sum, and will not exceed $38,595,798. The County may purchase any or all of them only through a formal, Board-approved amendment to the Agreement. These additional capabilities are an enterprise data warehouse, the hosting of the DHS Outpatient Pharmacy system, a cardiovascular information system as an alternative to the Phillips Insight System, and a Clinical Exchange Platform, which is Cerner's Health Information Exchange solution and will be available to the County as an alternate to the LANES initiative

Finally, the Agreement contains a limited (COLA) for Professional and Support Services after the 10th contract year and proceeding through the extension periods. Cerner may receive the lesser of: (a) the difference between the most recently published percentage change, if any, in the U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index - Urban Wage Earners and Clerical Workers ("CPI-W") for the Los Angeles - Riverside - Orange County Area for the contract year prior to the year for which the COLA is being calculated and the CPI-W for the contract year of the first use reconciliation or (b) three percent (3%). In no event shall the cumulative COLA increases over the five year extension period exceed five percent (5%) of the Support Services Fee or Fixed Hourly Rate for Professional Services as of the effective date of the Agreement. The COLA is limited to the following components of the Agreement: Support, Clinical Content, Application Management Services and Third Party Products. The Director has requested delegated authority to provide the COLA and increase the Contract Sum accordingly. The COLA will not exceed $1,374,984.

Budget

As previously indicated, DHS will return to the Board shortly with the budget adjustment for FY 2012-13. DHS will request appropriation and revenue changes in subsequent fiscal years through the budget process as necessary in accordance with the EHR total cost and revenue implementation plan for each respective fiscal year.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The Agreement includes all Board of Supervisors' required provisions. The Agreement also contains a modified Delegation and Assignment provision.

In accordance with the Board's policy of engaging outside counsel for certain information technology agreements, County Counsel retained the law firm of Foley & Larder, LLP to assist in all aspects of this procurement. Accordingly, Foley & Lardner, in conjunction with County Counsel, assisted DHS in its RFP planning and drafting; advised on all aspects of the RFP evaluation process; and drafted and negotiated the recommended Agreement. Additionally, in accordance with the Board's policy, the Office of the County Counsel separately has submitted to the Board an attorney-client privileged communication which analyzes the Agreement.

County Counsel has approved Exhibit I as to form. The CIO concurs with the Department's recommendation and that office's analysis is attached as Attachment E. CEO Risk Management has reviewed the Agreement provisions concerning Insurance and Indemnification and approves those provisions.

CONTRACTING PROCESS

On November 15, 2011, DHS released its RFP for an EHR System. The RFP contained detailed minimum qualifications which vendors were required to meet in order to proceed to the second phase, which was the submission of a substantive proposal. Notice of availability of the RFP was posted on the County's "Doing Business with Us" website and the entire document was available for download from the DHS Contracts and Grants Division website. In addition, DHS electronically notified potential vendors on its internal mailing list.

By the minimum mandatory proposal submission deadline of December 9, 2011, DHS received six proposals. All six proposals were reviewed and it was determined that two vendors met all of the minimum qualifications. All six vendors were notified of the decision as to each. The four vendors who were deemed not qualified had the opportunity to protest the DHS decision. Two of the vendors submitted protests and, after conferring with County Counsel and outside counsel, DHS determined the protests lacked merit. DHS denied both and neither vendor pursued the decisions.

By the March 1, 2012, deadline for proposal submission, DHS received substantive proposals from the two qualified proposers, Cerner Corporation and Epic Corporation. The proposal evaluation process was a complex and immense undertaking with over 150 individuals representing all segments of DHS as well as subject matter experts. The evaluation committee was comprised of 18 different subgroups and the evaluation process itself had many steps. The informed averaging process was used to evaluate the two proposals.

At the conclusion of proposal evaluation process, Cerner Corporation was the top ranked proposer. It is being recommended for an Agreement. Although a debriefing was offered to Epic, the firm declined. There were no protests as a result of this solicitation and the period of time permitted for such a protest has elapsed.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommendations will enable DHS to implement a centralized, standardized, enterprise-wide EHR System which will ensure that patients who seek services at any location within DHS will receive consistent care, supported by the same EHR across the entire care continuum.

Respectfully submitted,

Mitchell H. Katz, M.D.
Director

RICHARD SANCHEZ
Chief Information Officer

MHK:KH:kh

c: c: Chief Executive Office
County Counsel
Executive Office, Board of Supervisors

COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES

ELECTRONIC HEALTH RECORD STAFFING

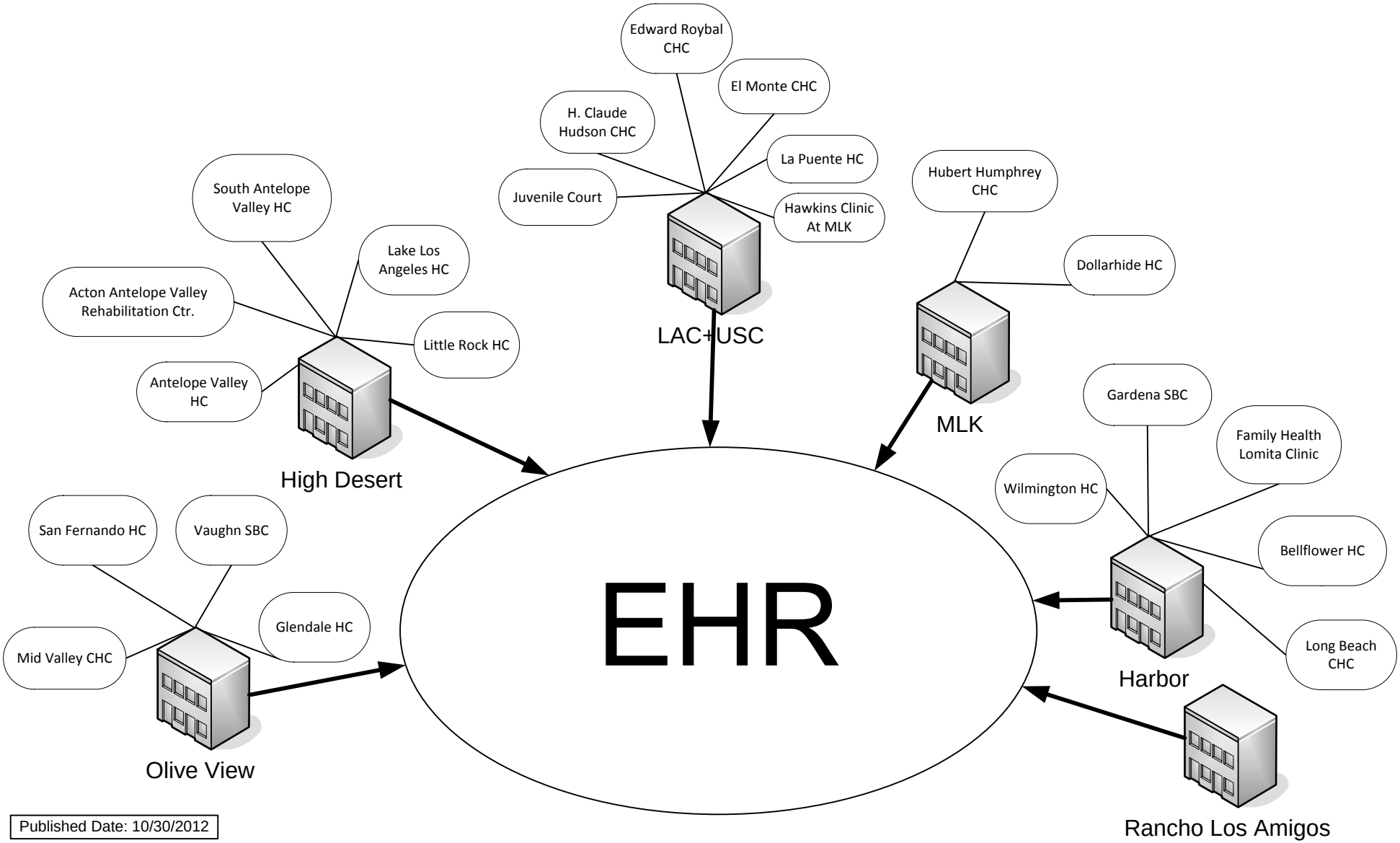
(Department# 110; Unit# 20219)

ITEM NUMBER	SUB	CLASSIFICATION	TOTAL FTE DEDICATED TO EHR	EXISTING RESOURCES	NEW POSITIONS
2620	A	Database Administrator	4	0	4
2569	A	Information Technology Specialist I	4	4	0
2546	A	Information Technology Technical Support Analyst II	10	2	8
2548	A	Information Technology Technical Support Supervisor	3	1	2
5516	A	Pharmacy Supervisor I (Informatics)	2	0	2
5475	A	Physician, MD (Informatics)	2	0	2
0668	A	Principal Accounting Systems Technician	1	0	1
2526	A	Principal Application Developer	1	1	0
2594	A	Principal Information Systems Analyst	4	1	3
5135	A	Registered Nurse III (Informatics)	6	3	3
2525	A	Senior Application Developer	7	3	4
2593	A	Senior Information Systems Analyst	31	13	18
2547	A	Senior Information Technology Technical Support Analyst	10	2	8
2619	A	Senior Information Technology Manager	1	1	0
		Total	86	31	55

Total of 86 dedicated FTE is required for EHR. Thirty-one positions will be offset by existing IT staff re-assignment, IT vacancies, and re-classed items. New request is for 55 FTE.

ATTACHMENT B

Projected LA County Enterprise Health Record



Published Date: 10/30/2012

Attachment C

EHR SYSTEM PLANNED ORDER OF IMPLEMENTATION

The current Information Technology (IT) infrastructure involves six separate Affinity "instances," including four IT facilities with both ambulatory and inpatient data (Olive View-UCLA Medical Center, LAC+USC Medical Center, Harbor-UCLA Medical Center, and Rancho Los Amigos National Rehabilitation Center), and two IT facilities with ambulatory data only (High Desert Multi-Service Ambulatory Care Center, Martin Luther King, Jr. Multi-Service Ambulatory Care Center). DHS' Comprehensive Health Centers (CHCs) and Health Centers (HCs) are included in clusters within each of the six IT centers. Once EHR implementation is complete, DHS data will no longer be divided into six areas, but will be integrated into one enterprise-wide solution. The planned order of implementation is as follows:

Order	Inpatient & Ambulatory	Ambulatory Only
1	Harbor-UCLA	MLK MACC
2	LAC+USC	High Desert MACC
3	Rancho Los Amigos	
4	Olive View-UCLA	

Department of Health Services
Electronic Health Record System
Projected Cash Flow Summary

November 20, 2012

Attachment D

		YEAR 1			YEAR 2	YEAR 3	YEAR 4	YEAR 5		YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	TOTAL	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15	Contract	YEAR 16	TOTAL
		Contract Initiation	FY 2012-13	Total Contract Initiation & Year 1	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	Total Contract Initiation & 5 YRS	FY2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Contract Initiation & 10 YRS	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	Initiation & 15 YRS (Fiscal Years)	FY 2027-28 (July 2027 to Dec 2027)	CONTRACT SUM (Contract Initiation to Dec 2027)
SYSTEM COSTS																							
A. Contract Costs																							
A1. Contract Elements																							
(1) Licensed Software		4,259,424	3,955,179	8,214,603	3,955,179	0	0	0	12,169,782	0	0	0	0	0	12,169,782	0	0	0	0	0	12,169,782	0	12,169,782
(2) Implementation Services & Training		4,027,747	13,478,437	17,506,184	13,515,877	74,880	74,880	74,880	31,246,700	37,440	0	0	0	0	31,284,140	0	0	0	0	0	31,284,140	0	31,284,140
(3) Hardware and Third Party Software		5,057,769	300,078	5,357,847	600,156	600,156	600,156	600,156	7,758,471	600,156	600,156	600,156	600,156	600,156	10,759,252	600,156	600,156	600,156	600,156	600,156	13,760,032	300,078	14,060,111
(4) Support *		0	6,030	6,030	185,786	919,775	1,788,401	2,096,764	4,996,756	2,096,764	2,096,764	2,096,764	2,096,764	2,096,764	15,480,574	2,096,764	2,096,764	2,096,764	2,096,764	2,096,764	25,964,392	1,048,379	27,012,771
(5) Clinical Content *		50,400	1,170,022	1,220,422	2,760,758	3,602,183	4,022,897	4,022,896	15,629,156	4,030,106	4,037,315	4,037,315	4,037,315	4,037,315	35,808,522	4,045,246	4,053,177	4,053,177	4,053,177	4,053,177	56,066,476	2,026,589	58,093,065
(6) Remote Hosting		3,188,800	962,190	4,150,990	1,924,380	3,026,635	4,781,245	5,433,600	19,316,850	5,433,600	5,433,600	5,433,600	5,433,600	5,433,600	46,484,850	5,433,600	5,433,600	5,433,600	5,433,600	5,433,600	73,652,850	2,716,800	76,369,650
(7) Application Management Services (AMS) *		325,000	0	325,000	358,788	1,594,974	2,886,093	3,299,815	8,464,670	3,299,815	3,299,815	3,299,815	3,299,815	3,299,815	24,963,744	3,299,815	3,299,815	3,299,815	3,299,815	3,299,815	41,462,820	1,649,907	43,112,727
(8) Third Party Products (ePrescribe, etc)		0	0	0	170,292	510,875	681,166	681,166	2,043,499	681,166	681,166	681,166	681,166	681,166	5,449,331	650,225	619,284	619,284	619,284	619,284	8,576,694	309,642	8,886,336
(9) COLA (apply to those items with *)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	79,460	231,468	304,016	304,016	304,016	1,222,976	152,008	1,374,984
(10) Estimated Taxes		0	59,265	59,265	59,265	0	0	0	118,530	0	0	0	0	0	118,530	0	0	0	0	0	118,530	0	118,530
Total Contract Elements		16,909,140	19,931,201	36,840,341	23,530,480	10,329,478	14,834,838	16,209,277	101,744,414	16,179,047	16,148,816	16,148,816	16,148,816	16,148,816	182,518,725	16,205,265	16,334,264	16,406,812	16,406,812	16,406,812	264,278,688	8,203,403	272,482,095
A2. Optional Work/Pool Dollars (by DHS Change Order)																							
Planned Additional Software - Lighthouse		0	0	0	0	121,779	197,688	245,727	565,194	349,506	488,904	653,142	622,242	591,342	3,270,330	532,572	483,192	378,072	405,942	378,072	5,448,180	0	5,448,180
Professional Services and Training		0	0	0	2,846,394	6,572,441	3,022,726	0	12,441,561	0	0	0	0	0	12,441,561	0	0	0	0	0	12,441,561	0	12,441,561
Use Reconciliation		0	2,500,000	2,500,000	2,500,000	2,555,740	2,055,740	2,055,740	11,667,220	5,055,740	2,000,000	4,000,000	2,000,000	2,000,000	26,722,960	3,000,000	2,100,000	2,100,000	2,100,000	2,000,000	38,022,960	0	38,022,960
Total Additional Optional Work/Pool Dollars (by DHS Change Order)		0	2,500,000	2,500,000	5,346,394	9,249,960	5,276,154	2,301,467	24,673,975	5,405,246	2,488,904	4,653,142	2,622,242	2,591,342	42,434,851	3,532,572	2,583,192	2,478,072	2,505,942	2,378,072	55,912,701	0	55,912,701
A3. Additional EHR Capabilities (by Board Approved Amendment)																							
Enterprise Data Warehouse		0	0	0	795,679	771,680	771,680	403,109	2,742,148	427,109	403,109	403,109	403,109	403,109	4,781,693	403,109	403,109	403,109	403,109	403,109	6,797,238	0	6,797,238
Hosting Etreby		0	0	0	357,140	458,434	458,434	354,072	1,628,080	354,072	354,072	354,072	354,072	354,072	3,398,440	354,072	354,072	354,072	354,072	354,072	5,168,800	0	5,168,800
Powerchart Cardiovascular		0	0	0	2,565,508	2,825,700	2,825,700	810,192	9,027,100	810,192	810,192	810,192	810,192	810,192	13,078,060	810,192	810,192	810,192	810,192	810,192	17,129,020	0	17,129,020
Clinical Exchange Platform (HIE, LANES Alternative)		0	0	0	1,134,121	931,621	931,621	591,216	3,588,580	591,216	591,216	591,216	591,216	591,216	6,544,660	591,216	591,216	591,216	591,216	591,216	9,500,740	0	9,500,740
Total Additional EHR Capabilities (by Board Approved Ammendment)		0	0	0	4,852,448	4,987,435	4,987,435	2,158,589	16,985,908	2,182,589	2,158,589	2,158,589	2,158,589	2,158,589	27,802,853	2,158,589	2,158,589	2,158,589	2,158,589	2,158,589	38,595,798	0	38,595,798
Total Contract Costs (A1 + A2 + A3)		16,909,140	22,431,201	39,340,341	33,729,322	24,566,873	25,098,428	20,669,333	143,404,297	23,766,882	20,796,309	22,960,547	20,929,647	20,898,747	252,756,429	21,896,426	21,076,045	21,043,473	21,071,343	20,943,473	358,787,187	8,203,403	366,990,594

This is a projected cash flow subject to the actual dates of payments which may cause the amounts payable in a fiscal year to change.

RICHARD SANCHEZ
CHIEF INFORMATION OFFICER

Office of the CIO

CIO Analysis

NUMBER:	DATE:
CA 12-23	11/8/2012

SUBJECT:

APPROVAL OF AN ELECTRONIC HEALTH RECORD SYSTEM AGREEMENT WITH CERNER CORPORATION AND REQUEST FOR HIRING AUTHORITY

RECOMMENDATION:

☒ Approve ☐ Approve with Modification ☐ Disapprove

CONTRACT TYPE:

☒ New Contract ☐ Sole Source
☐ Amendment to Contract #: Enter contract #. ☐ Other: Describe contract type.

CONTRACT COMPONENTS:

☒ Software ☒ Hardware
☒ Telecommunications ☒ Professional Services

SUMMARY:

Department Executive Sponsor: Mitchell H. Katz, M.D.

Description: Department of Health Services is requesting authorization: 1) to execute an Agreement with Cerner Corporation (Cerner) effective December 21, 2012, through December 31, 2022, for the provision of an Electronic Health Record (EHR) System with five, one-year automatic extensions, at the County's discretion, through December 31, 2027; 2) to execute Change Notices to the Agreement that do not require any additional costs or affect any term of condition of the Agreement, and to issue Change Orders to purchase additional work using Agreement Pool Dollars; 3) to execute amendments to terminate the Agreement in full or part for convenience, to reduce services and Contract Sum, to add or change terms and conditions as required by the Board, and to provide a limited Cost of Living Adjustment in renewal term (after 10 years); and 4) to fill 55 new positions to support the system implementation.

Contract Amount: $366,990,594 Funding Source: Bond funding, Incentive payments, and DHS' Operating Budget

☒ Legislative or Regulatory Mandate ☐ Subvened/Grant Funded: Enter %

Strategic and Business Analysis	PROJECT GOALS AND OBJECTIVES: The objectives of the EHR project is to: 1) enhance patient safety and care delivery, 2) reduce costs of delivering high-quality care, 3) ensure continued revenue by complying with Meaningful Use guidelines, and 4) retire the current solution which will become unsupported by the existing vendor.

BUSINESS DRIVERS:

The key business drivers for the project are:

1) Improve patient care – The implementation of a centralized, standardized, enterprise-wide EHR System will ensure that DHS' patients receive consistent care through the entire care continuum.

2) Comply with Federal healthcare requirements – The implementation of a certified EHR system will enable DHS to meet Meaningful Use requirements under American Recovery and Reinvestment Act of 2009 (ARRA), to receive ARRA's incentives related to achieving "Meaningful Use", and to avoid penalties for non-compliance with ARRA as a result of failing to achieve "Meaningful Use."

PROJECT ORGANIZATION:

Dr. Mitchell H. Katz, Director of Department of Health Services, is the Project Executive Sponsor and Dr. Roger Lewis is the Project Director. Kevin Lynch, DHS' CIO, is the IT lead working with Dr. Lewis. DHS has established a strong governance comprised of clinical and technology teams that worked effectively throughout the contracting and negotiation process. DHS will need to transition to project governance for project design and build phase once the Agreement is approved by the Board.

PERFORMANCE METRICS:

The proposed Agreement identifies Service Levels for Response Time, Resolution Time, and Software Response Time. The County will receive corresponding credits for failures to meet these Service Levels.

STRATEGIC AND BUSINESS ALIGNMENT:

The project supports the following County Strategic Plan goals: Operational Effectiveness, Fiscal Sustainability, and Integrated Services Delivery.

PROJECT APPROACH:

DHS is acquiring and provisioning Cerner's commercial-off-the-shelf EHR software. It will be configured to meet DHS business needs, but the Department's intent is to minimize system customizations. The EHR deployment will be implemented in phases for inpatient hospitals and ambulatory clinics. The planned order of implementation is: Harbor-UCLA Medical Center and Martin Luther King Multi-Ambulatory Care Center, LAC+USC Medical Center, High Desert Multi-Ambulatory Care Center, Rancho Los Amigos National Rehabilitation Center, and Olive View Medical Center.

DHS will assign facility business owners (e.g., clinicians, nurses, physicians, technicians, and registration staff) to represent every facility and will be responsible for collaboratively designing, building, testing, training, and implementing EHR modules.

ALTERNATIVES ANALYZED:

DHS conducted a comprehensive RFP solicitation process that identified Cerner as the leading proposer.

Technical Analysis	ANALYSIS OF PROPOSED IT SOLUTION: The Cerner EHR Solution is called Millennium and includes both core component and additive components. The DHS project scope includes: Scheduling, Registration, Master Patient Index, Medical Records, Orders/Results, Computerized Physician Order Entry, Clinical Documentation, Operating Room, Emergency Room, Radiology, Laboratory and Inpatient Pharmacy, and a Document Imaging System. Existing DHS systems that will interface to the EHR system include: the Fuji PACS Radiology, QuadraMed Patient Accounting, and Outpatient Pharmacy. The DHS EHR system will be hosted at Cerner's primary data center in Kansas City, Missouri. It is N-Tier application that utilizes a Linux Operating System and a back-end Oracle database. Clinical images and documentation are stored in an enterprise class Storage Area Network. DHS users will securely access the majority of the EHR system modules using a Citrix Web Front End Server Farm. Certain system modules for document imaging, maternity care, etc., will be hosted locally in servers at DHS facilities that will continuously transmit data to system servers in the Kansas City data center. A secondary data center located approximately 20 miles from the primary data center in the suburbs of Kansas City will be used as a cold site for disaster recovery. Both the primary and secondary facilities have been designed, built, and maintained according to the FEMA P-361 standard, which defines appropriate safety of buildings required to survive an EF-5 tornado event. The EHR solution has redundant, dedicated telecommunications circuits entering from two geographical areas (Las Vegas and Phoenix) into the County's wide area network. In case of major outage that impacts both data centers and telecommunication links, DHS staff will utilize Downtime Viewers (DTV) to access a limited amount of data stored locally.

Financial Analysis	BUDGET: A Projected Cash Flow Summary (See Attachment D of the Board Letter) provides a 15 year funding analysis for the project. The total Contract Sum will not exceed $366,990,594 including the extension periods. The components are: 1. Contract Elements in the amount of $272,482,095, which includes software licenses, implementation services, hardware, third party software, support, remote hosting, and Application Management Services. 2. Optional Work/Pool Dollars in the amount of $55,912,701, which includes additional software professional services, training, and Use Reconciliation (if actual system usage exceeds projected system usage in the base contract). 3. Additional EHR capabilities in the amount of $38,595,798 for acquisition of future software. Acquiring some or all of these software components will require separate Board approval. DHS is also requesting authorization to fill 55 new Full-Time Equivalent (FTE) positions to support the project (See Attachment A of the Board letter). CEO and DHS intend to fund the initial development of the EHR System through the issuance of taxable commercial paper over a 2 to 3 year period. Upon completion and implementation of the first three DHS clusters anticipated by the end of FY 2014-15, any outstanding commercial paper will be redeemed through the issuance of long-term revenue bonds with a final maturity of ten-years. Upon completion of the entire project, which is anticipated in the Summer 2016, a second series of ten-year revenue bonds will be issued.

Risk Analysis	RISK MITIGATION: 1. Hiring appropriate and timely project resources (55 new positions) will be a critical success factor. DHS is working with CEO and DHR to address this issue. 2. Strong change management is required to ensure buy-in on standardizing clinical work processes across the DHS system. DHS has established a strong governance and communication process to promote this buy-in throughout the system. 3. The County CIO will be engaged to provide project oversight and quality assurance. 4. To mitigate service disruption resulting in the event of a disaster, DHS is working with Cerner to: • Procure Cerner's 724 Access Downtime Viewer to provide access to critical client data in case of an outage, including a network outage. • Maintain, test, review, and update a Business Continuity Plan and Disaster Recovery Plan for Cerner's Hosting Environment that will be available in the event of any unplanned interruption. • Ensure that the County's data will be stored on redundant applications and database hardware in their Primary Data Center and that this data is replicated in Cerner's Secondary Data Center. 5. The Chief Information Security Officer (CISO) has reviewed the Agreement and did not identify any IT security or privacy related issues.
CIO Approval	PREPARED BY: Sanmay Mukhopadhyay, Sr. Associate CIO — Date 11/13/2012 APPROVED: Richard Sanchez, County CIO — Date 11-13-12

Please contact the Office of the CIO (213.253.5600 or info@cio.lacounty.gov) for questions concerning this CIO Analysis. This document is also available online at http://ciointranet.lacounty.gov/

AGREEMENT BY AND BETWEEN

THE COUNTY OF LOS ANGELES

AND

CERNER CORPORATION

FOR

ELECTRONIC HEALTH RECORDS SYSTEM AND SERVICES

DECEMBER 21, 2012

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ELECTRONIC HEALTH RECORDS
SYSTEM AND SERVICES AGREEMENT

This Electronic Health Records System and Services Agreement, Agreement No. H-705407, (the **"Agreement"**) is made and effective as of December 21, 2012 (**"Effective Date"**), by and between the County of Los Angeles, a political subdivision of the State of California (**"County"**) and Cerner Corporation, with its principal place of business at 2800 Rockcreek Parkway, North Kansas City, MO 64117 (**"Contractor"**). When used herein, the term "**Agreement**" includes the body of this Agreement and any and all Statements of Work entered into by the Parties hereunder and such other exhibits ("**Exhibit(s)**"), attachments ("**Attachment(s)**"), schedules ("**Schedule(s)**") appended to this Agreement and additional documents or web based materials that the Parties identify and agree to incorporate herein by reference. In the event of a conflict between the body of this Agreement and any Statement of Work, Exhibit, Attachment, Schedule, or incorporated material, the body of this Agreement shall govern. For purposes of determining conflicts between parts of this Agreement, Exhibit N (Additional Hosting Services Terms and Conditions) shall be deemed to be part of the body of this Agreement. Contractor and County may be referred to in this Agreement individually as a "**Party**" and together as the "**Parties**."

RECITALS

A. County is authorized by California Government Code Sections 26227 and 31000 to contract for goods and services, including the Services contemplated herein.

B. "**DHS**" is the County's Department of Health Services and is among the largest public hospital systems in the United States. DHS is governed by County's Board of Supervisors ("**Board**") through its appointed Director of DHS ("**Director**"). DHS serves the health care needs of nearly ten million County residents and encompasses hospital and outpatient care, programs, and clinics. At its core, DHS is a "safety net" health care provider. As such, it is the major provider of health care to more than two million County residents without health insurance. DHS provides the vast majority of all "uncompensated" medical care in the County. The mission of DHS is to ensure access to high-quality, patient-centered, cost-effective health care to Los Angeles County residents through direct services at DHS facilities and through collaboration with community and university partners. DHS provides extensive acute and rehabilitative patient care. DHS also trains physicians through affiliations with the University of Southern California Keck School of Medicine and the University of California at Los Angeles Medical School. DHS operates four inpatient hospitals, and also operates an extensive outpatient, ambulatory care system.

C. County seeks to facilitate the adoption of and promote the use of health information technology ("**HIT**") in the interests of quality of care, patient safety, and health care efficiency, while also maintaining patient data security and privacy. In support of these objectives, County is seeking to implement an electronic health record to link electronically participating physicians and other care givers, physicians' practices, clinics, reference labs, imaging centers, pharmacies, diagnostic centers, patients, and other health care or related entities (collectively, the "**EHR**"). Contractor recognizes that the EHR and County provide services essential to the community and that the continued availability and reliability of the Licensed Software, Hosting Software, Third-Party Products, Hardware, and Services (all as defined herein) are critical to facilitate the adoption by and trust of the community in the EHR. To that end, the Licensed Software, Hosting Software, Third-Party Products, Hardware, and Services provide access to authorized users, while

maintaining strict data integrity and security; maintaining agreed performance and availability; and meeting the other requirements of this Agreement. The EHR, or alternatively, the Licensed Software, Hosting Software, Hardware, Third-Party Products and Services, all as more particularly described herein, are sometimes referred to collectively in this Agreement as, and were referred to collectively in the RFP as, "**EHR System**."

D. The EHR System must enable the exchange of, as appropriate, health information, including clinical, administrative, outcome, and financial information at both the patient and community-wide levels in an effort to (1) improve the quality of care, patient safety, and health care efficiency, (2) improve care coordination and collaboration within the County community of caring, (3) facilitate reporting on clinical quality measures, (4) integrate patient care services at all levels of delivery, (5) assist in the evaluation of the necessity and cost effectiveness of care, (6) enhance measurement of patient satisfaction and outcomes, (7) comply with regulatory and accreditation agency reporting requirements, (8) assist County and individual physicians in effectively delivering care and in the collection, storage, retrieval, and protection of patient care and related information, and (9) achieve the business objectives set forth in Exhibit H (EHR Program Strategy) (collectively, the "**Business Objectives**"). Both Parties acknowledge that a principal objective of County in entering into this Agreement is to obtain the functionality from the Licensed Software, Hosting Software, Third-Party Products and Hardware to enable County to achieve the Business Objectives stated above.

E. County's EHR System must be designed and implemented to comply with all applicable requirements of the rules on electronic health records issued by the U.S. Department of Health and Human Services (**"HHS")** (including those of the Office of the National Coordinator for Health Information Technology ("**ONC**"), Centers for Medicare and Medicaid Services ("**CMS**"), and the Office of the Inspector General ("**OIG**")), which also implement provisions of the American Recovery and Reinvestment Act of 2009 ("**ARRA**"). This Agreement sets forth the terms under which Contractor will provide the EHR System.

F. County issued a Request for Proposal for the Electronic Health Records System (EHR System) RFP #KL2011 ("**RFP"**), dated November 15, 2011, for the provision, implementation, and maintenance and support of the EHR System. Contractor submitted a Proposal in response to the RFP, based on which Contractor was selected to enter into contract negotiations with County. Based on those negotiations, this Agreement was submitted to the Board for its consideration for Approval and award.

G. County desires to license the Licensed Software and obtain Hardware, Third-Party Products and the Services from Contractor, including, but not limited to, the Implementation Services, Hosting Services, Support Services, training, and other professional services, all as more particularly described herein. The Services to be provided by Contractor are set forth in this Agreement and such Statements of Work as the Parties may mutually agree upon from time to time.

H. Contractor represents that it will provide County the Contractor Personnel, Licensed Software, Hosting Software, Third-Party Products and Services with the requisite technological capabilities, professional skills, business process and information technology knowledge, software implementation and project management expertise, integration capabilities, hosting capabilities and services, and skilled resources required to implement the Licensed Software, Hosting Software, and Third-Party Products on the Recommended Configuration to conform to the Specifications and other terms and conditions of this Agreement and to effectively integrate all components of the EHR System.

AGREEMENT

In consideration of the foregoing Recitals (which are incorporated herein) and the mutual covenants and agreements contained herein, the Parties hereto agree as follows:

1. TERM

1.1 TERM

The term of this Agreement shall commence on the Effective Date and continue in full force and effect until the earlier of (a) the Agreement is terminated as provided in Section 29 (Termination), or (b) the expiration or termination of the Support Term (collectively, the "**Term**"), subject to Section 1.3 (Term of Statements of Work; License Term), Section 29.7 (Effect of Termination), and Section 29.9 (Survival).

1.2 INITIAL AND RENEWAL SUPPORT TERMS FOR SUPPORT SERVICES

The term for Support Services, as defined in Section 9.7 (Support Services), shall commence on the Effective Date and continue in full force until December 31, 2022, unless earlier terminated as provided herein (the "**Initial Support Term**"). Upon the expiration of the Initial Support Term, County may, at its option, extend Support Services, which will automatically renew for up to five (5) additional consecutive one (1) year terms (individually, each a "**Renewal Support Term**," and collectively referred to as, the "**Renewal Support Term"**). Not less than one hundred and twenty (120) days prior to the expiration of the Initial Support Term and each Renewal Support Term, Contractor shall provide written notice to County of the pending expiration of the Support Term and the date on which the Support Term will expire. At its option, County may elect, upon no less than thirty (30) days written notice to Contractor, to allow the Support Term to expire upon the end of the then-current Support Term. In the event Contractor fails to provide the notice of the pending expiration of the Support Term provided in this Section 1.2 (Initial and Renewal Support Terms for Support Services), County may terminate the Support Term on thirty (30) days written notice, without fee or penalty, at any time thirty (30) days before receiving the next notice of pending expiration to be provided by Contractor. The Initial Support Term and any Renewal Support Term are referred to herein collectively as the "**Support Term**." Pursuant to Section 14.10 (Cost of Living Adjustment), such notice shall identify any fee increase applicable to the Renewal Support Term that is about to commence.

1.3 TERM OF STATEMENTS OF WORK; LICENSE TERM

The commencement and termination dates for Statements of Work, to the extent applicable, shall be as provided in each Statement of Work. Termination of the Term of this Agreement, and termination or expiration of the Support Term, shall not affect the License granted in Section 3 (Licensed Software) and related License provisions, which License shall continue in perpetuity, notwithstanding expiration or termination of this Agreement or the Support Term. The term of the License granted in Section 3.1 (License Grant) shall be referred to as the "**License Term**." For the avoidance of doubt, Section 29.2 (Termination for Material Breach) shall not apply to allow termination of the License granted in Section 3 (Licensed Software),

except in the event of County's material breach of Section 18 (Intellectual Property) or Section 19 (Confidentiality).

2. IDENTIFICATION OF PARTIES

2.1 CONTRACTOR; SUBCONTRACTING

(a) Unless specifically authorized by County as provided herein, Contractor shall perform the obligations described in this Agreement and in the Statement(s) of Work itself, through its direct wholly-owned subsidiaries, provided such subsidiaries are disclosed in writing to County, and such subcontractors are identified on Exhibit BB (County Approved Contractor Entities and Countries). Contractor represents and warrants that it has entered into agreements with each such subsidiary under which such subsidiary has assigned to Contractor all rights necessary for Contractor to fulfill its obligations under this Agreement and to enable Contractor to assign and license to County under this Agreement the same rights that would have been assigned and licensed to County if Contractor had performed the obligations described under this Agreement and in any Statement(s) of Work by itself without the participation of any such subsidiary. All references to Contractor in this Agreement shall be deemed to include all such subsidiaries.

(b) County has relied, in entering into this Agreement, on the reputation of and on obtaining the personal performance of Contractor itself. Consequently, no performance of this Agreement, or any portion thereof, shall be subcontracted by Contractor without the prior written consent of County as provided in this Section 2.1 (Contractor; Subcontracting) which consent shall not be unreasonably withheld or delayed. Any purported agreement by Contractor to subcontract any performance under this Agreement without obtaining the prior written consent of County as provided in this Section 2.1(b) (Contractor; Subcontracting), shall not modify, alter, nor amend the Agreement or any rights, obligations, or responsibilities as between Contractor and County and shall require Contractor to provide the Services to County through a subcontractor Approved as provided in this Section 2.1 (Contractor; Subcontracting) and without any disruption to the Services or impact to the County's operations. In addition, Contractor shall indemnify County as provided in Section 23 (Indemnification) for any claims, demands, damages, liabilities, losses, costs, and expenses, including defense costs and reasonable legal, accounting, and other expert, consulting, or professional fees, and legal research fees arising from or related to the unapproved subcontractor's acts or omissions. Entering into a subcontract in violation of this Section 2.1 (Contractor; Subcontracting) shall be deemed a material breach of this Agreement. Notwithstanding the foregoing, County's prior written consent shall not be required prior to subcontracting with any third-party manufacturer of any Hardware for purposes of providing maintenance and support under Exhibit AA (Hardware Subcontractors Exempt from Approval)), provided that (a) such third-party manufacturers are not required to come onsite to any County Facility or access any patient records for purposes of providing such maintenance and support, (b) no staff of such third-party manufacturers are named in or otherwise dedicated to this Agreement, and (c) Contractor invoices County as part of the Contract Sum directly for any and all services provided by such third-party manufacturers (collectively "**Permitted Subcontractor**").

(c) If Contractor desires to subcontract any portion of its performance under this Agreement other than as specifically set forth in Section 2.1(b) (Contractor; Subcontracting), Contractor shall provide to County, in writing, a request for written Approval to enter into the particular subcontract, which request shall include:

(i) The reason(s) for the particular subcontract;

(ii) Identification of the proposed subcontractor and an explanation of why and how the proposed subcontractor was selected;

(iii) A detailed description of the work to be performed by the proposed subcontractor;

(iv) Confidentiality provisions applicable to the proposed subcontractor's officers, employees, and agents, which would be incorporated into the subcontract;

(v) A draft copy of the proposed subcontract agreement, in the form of Exhibit DD (Form Subcontractor Agreement), which shall, at a minimum:

(1) include representations and warranties by subcontractor that subcontractor (A) is qualified to perform the work for which subcontractor has been hired; (B) maintains the insurance required by this Agreement, and (C) is solely liable and responsible for any and all of its taxes, payments, and compensation, including compensation to its employees;

(2) provide for indemnification by subcontractor of County and Contractor under the same terms and conditions as the indemnification provisions of this Agreement set forth in Section 23 (Indemnification); and

(3) include (A) an executed Confidentiality and Assignment Agreement substantially similar to Exhibit R (Confidentiality and Assignment Agreement), (B) a copy of the executed Contractor Business Associate Agreement with Contractor, (C) an executed EEO Certification substantially similar to Exhibit S (Contractor’s EEO Certification), (D) Exhibit T.1 (Safely Surrendered Baby Law), and (E) any other standard County required agreements, forms, and provisions, some of which may need to be executed by the proposed subcontractor and Contractor, as applicable;

(vi) Unless otherwise waived by County, copies of certificates of insurance from the proposed subcontractor, which establish that the subcontractor maintains the minimum programs of insurance required by County; and

(vii) Other pertinent information and/or certifications requested by County.

(d) County will review Contractor’s request to subcontract and determine on a case-by-case basis whether or not to consent to such request, which consent shall not be unreasonably withheld.

(e) Subject to and in addition to the provisions of Section 23 (Indemnification), Contractor shall indemnify, defend, and hold harmless County, its officers, employees and agents, from and against any and all third-party claims, demands, liabilities, damages, costs and expenses, including, but not limited to, defense costs and reasonable legal, accounting or other expert consulting or professional fees arising from or related to Contractor's use of any subcontractor, including, without limitation, any officers, employees, or agents of any subcontractor, in the same manner as required for Contractor, its officers, employees, and agents, under this Agreement.

(f) Notwithstanding County's consent to any subcontracting, Contractor shall remain fully responsible for any and all performance required of it under this Agreement, including that which Contractor has determined to subcontract, including, but not limited to, the obligation to properly supervise, coordinate, and perform all work required under this Agreement. All subcontracts shall be made in the name of Contractor and shall not bind nor purport to bind County. Furthermore, County Approval of any subcontract shall not be construed to limit in any way Contractor's performance, obligations, or responsibilities to County, nor shall such Approval limit in any way County's rights or remedies contained in this Agreement. Additionally, County's Approval of any subcontract shall not be construed in any way to constitute the determination of the allowableness or appropriateness of any cost or payment under this Agreement.

(g) County's consent to any subcontracting shall not waive County's right to prior and continuing approval of any and all personnel, including subcontractor employees, providing services under this Agreement. Contractor shall notify its subcontractors of County's right prior to subcontractors commencing performance under this Agreement. Contractor shall assure that any subcontractor personnel not Approved in writing by County shall be immediately removed from the provision of any Services under the particular subcontract or that other action is taken as requested by County.

Further, in the event that County consents to any subcontracting, such consent shall be subject to County's right to terminate, in whole or in part, any subcontract at any time upon written notice to Contractor when such subcontractor is deemed by County to be in material breach of its subcontract or this Agreement. County shall not be liable or responsible in any way to Contractor, to any subcontractor, or to any officers, employees, or agents of Contractor or any subcontractor, for any claims, demands, damages, liabilities, losses, costs, or expenses, including, but not limited to, defense costs and legal, accounting and other expert, consulting or professional fees, in any way arising from or related to County's exercise of such right.

(h) Notwithstanding County's consent to any subcontracting, Contractor shall be solely liable and responsible for any and all payments and other compensation to all subcontractors, and their officers, employees, agents, and successors in interest, for any services performed by subcontractors under this Agreement.

(i) In the event that County consents to any subcontracting, for each subcontract entered into by Contractor, other than with respect to Permitted Subcontractors, Contractor shall deliver to the County Project Director, immediately after the effective date of the

subcontract but in no event later than the date any work is performed under the subcontract:

(i) A fully executed copy of each subcontract entered into by Contractor;

(ii) An executed version of County's then current Confidentiality and Assignment Agreement ("**Confidentiality and Assignment Agreement**") and Business Associate Agreement ("**BAA**") for each subcontractor Approved to perform work under this Agreement on behalf of such subcontractor and all of employees who will be performing such work; and

(iii) Unless otherwise waived by County, certificates of insurance which establish that the subcontractor maintains the minimum programs of insurance required by County under this Agreement.

(j) Notwithstanding County's consent to any subcontracting, Contractor shall be jointly and severally liable with each subcontractor for any breach by any subcontractor of this Agreement, the Confidentiality and Assignment Agreement, or the BAA.

(k) In the event that County consents to any subcontracting, such consent shall apply to each particular subcontract only and shall not be, or be construed to be, a waiver of this Section 2.1 (Contractor; Subcontracting) or a blanket consent to any further subcontracting.

2.2 COUNTY

The rights and obligations of County may be, in whole or in part, exercised or fulfilled by County's departments, joint power authorities in which County is a participant, and other public collaborative efforts, such as a community health information exchange ("**HIE**"), and participants of the Community Partners ("**CP**") Program, existing now or in the future (each, an "**Affiliated User,**" and collectively, "**Affiliate Users**"). County will implement appropriate contractual protections with regard to the Licensed Software with its CPs and, HIE participants (only in the event HIE participants HIE are allowed direct access to the Licensed Software) and expressly identify Contractor as a third-party beneficiary of any such agreement.

2.3 COUNTY DESIGNEE

Any third-party outsourcing vendor, contractor, agent, or other person or entity designated by County in writing (the "**County Designee**") shall be entitled to perform any responsibilities, obligations, or other provisions attributed to County under this Agreement. Contractor shall fully cooperate, communicate, coordinate with, and respond to all the requests of the County Designee, and Contractor will provide the County Designee with the appropriate information in the possession of Contractor relating to the Services. Contractor shall be entitled to reasonably rely on the County Designee, provided, however, that County written Approval shall be required for any work effort requested by a County Designee that may result in additional costs to the County. County shall be entitled to amend and/or terminate its use of the County Designee at any time upon advance notice to Contractor. County will require each County Designee to enter into an agreement containing appropriate confidentiality and non-use provisions with respect to

Contractor's Confidential Information. County shall remain responsible to Contractor for any and all performance required under this Agreement by the County Designee. County shall be entitled to provide the County Designee with Contractor's Confidential Information as required for the County Designee to provide its services to County pursuant to this Section 2.3 (County Designee).

3. LICENSED SOFTWARE

3.1 LICENSE GRANT

3.1.1 SCOPE OF LICENSE

Subject to the terms and conditions of this Agreement, Contractor grants to County a perpetual (except the license granted may not be perpetual as to certain Third-Party Products if otherwise specifically set forth in Exhibit B (EHR System Software Components)), non-exclusive, transferable (as provided in Section 32.17.2 (Assignment by County) license to use the Licensed Software, Third-Party Products and Documentation (as defined in Section 3.3 (Documentation) below) for County's business purposes and activities (hereinafter "**License**"). For the purposes of this Section 3 (Licensed Software), the term "**Use**" as it applies to Licensed Software and Third-Party Products means to copy, install, access, execute, operate, deploy, archive and run the Licensed Software and Third-Party Products for installation, test, development, production, support, archival, emergency restart, and disaster recovery purposes. Without limitation of the above, County's business purposes and activities will include making the Licensed Software, Third-Party Products and Documentation available to physicians, other health care providers, and other health care facilities, federal, State, and local agencies, and business partners (each a "**User**") to facilitate the use and the expansion of County's EHR System. County will ensure that Users who are not employees, not under contract with the County, or are not otherwise under the management of County, will execute confidentiality and appropriate use restrictions as to the EHR System as set forth in this Agreement. Licensed Software shall be and shall remain the exclusive property of Contractor, or, as applicable, Contractor's third-party licensor's. Notwithstanding the foregoing, Licensed Software items identified on Exhibit B (EHR System Software Components) as "Clinical Content," "ASP" or "Subscription" will have a license term coextensive with the Support Term.

3.1.2 LICENSE RESTRICTIONS

The Licensed Software, Hosting Software and Third-Party Products shall not in any way be disassembled, decompiled or reverse engineered, nor shall any attempt to do same be undertaken or knowingly permitted by County, except to the extent permitted by applicable law or authorized by Contractor. No right to modify, create derivative works (except as to the Documentation) of, translate or distribute the Licensed Software, Hosting Software and Third-Party Products are granted, except as provided in this Agreement.

3.1.3 COUNTY'S USE IN EXCESS OF LICENSE LIMITATIONS

In the event the Licensed Software or Third-Party Products are licensed on a limited basis (e.g., licensed on a per user, server, CPU, named user basis) and County Uses the Licensed Software or Third-Party Products in excess of such limited basis, County shall be solely responsible for payment of the license fees attributable to the excess Use at County's rates under this Agreement.

3.1.4 HOSTING SOFTWARE LICENSE

Hosting Software shall be and shall remain the exclusive property of Contractor, or, as applicable, Contractor's third-party licensors. Contractor hereby represents and warrants that it is authorized to use, all software provided in connection with providing the Hosting Services to County or, alternatively, to the extent permissible under its applicable licenses, Contractor grants to County during the Term and during the termination transition period as set forth in Section 29.8 (Termination Transition Services), a license to the software required solely to receive and use the Hosting Services provided by Contractor.

3.2 REVISIONS

During the Support Term, all Revisions distributed to any customer by Contractor (including Displaced/Renamed Products) shall be provided to County at no additional charge beyond the fees payable hereunder for Support Services. During the Support Term, if (a) the Licensed Software is displaced in Contractor's product line by another product or (b) a renamed product containing substantially similar functionality to the Licensed Software is made Generally Available to clients by Contractor (even if the renamed product contains additional features, functionality, or other capabilities) (each a "**Displaced/Renamed Product**"), County shall receive such Displaced/Renamed Product as a Revision.

3.3 DOCUMENTATION

For purposes of this Agreement, the term "**Documentation**" shall mean all of Contractor's training course materials, system specifications and technical manuals, and all other user instructions provided by Contractor or otherwise made available or accessible to County regarding the capabilities, operation, and use of the Licensed Software, including, but not limited to, online help screens contained in the Licensed Software, existing as of the Effective Date and any revisions, supplements, or updates thereto. At no additional charge to County, Contractor shall provide or make available to County all Documentation relating to the Licensed Software. If the Documentation for the Licensed Software is revised or supplemented at any time, Contractor shall promptly provide or make available to County a copy of such revised or supplemental Documentation, at no additional cost to County. County may, at any time, make a reasonable number of copies of all Documentation and other materials provided or made available by Contractor, distribute such copies to County personnel or County Designees, and incorporate such copies into its own technical and user manuals, provided that such reproduction relates to County's and its personnel's Use of the Licensed Software as permitted in this Agreement, and all copyright and trademark notices, if any, are reproduced thereon. Contractor shall provide or make available to County all Documentation in electronic form. Documentation as to Integral Third-Party Software or Third-Party Products shall be included

within the meaning of the term "Documentation", provided, such Documentation is accessible or available to Contractor.

4. ESCROW OF SOURCE MATERIALS

4.1 ESCROW AGENT AND RELEASE CONDITIONS

Contractor has deposited a copy of the Source Material with Iron Mountain Incorporated, as the assignee and successor in interest to the Master Preferred High Technology Escrow Agreement between Contractor and Data Securities International, Inc., a software escrow agent (the "**Escrow Agent**"), located at 2100 Norcross Pkwy, Suite 150, Norcross, GA 30071 (the "**Escrow**") pursuant to a written escrow agreement ("**Escrow Agreement**"). A copy of the Escrow Agreement shall be incorporated by reference into this Agreement as Exhibit Q (Escrow Agreement). Contractor shall continually update the Source Material by promptly depositing in the Escrow each new Revision of the Licensed Software. Contractor's duty to update the Source Material shall continue through the Support Term or until County ceases obtaining Support Services from Contractor, whichever is later. The Source Material will be held in the Escrow. The events upon which County shall have access to the Source Material shall include (collectively the "**Release Conditions**"): (a) the insolvency of Contractor; (b) the making of a general assignment by Contractor for the benefit of its creditors or a filing of a voluntary or involuntary petition in bankruptcy by or against Contractor that is not dismissed within one-hundred and twenty (120) days of the filing thereof; (c) as set forth in Section 5 (Bankruptcy and Liquidation); (d) in the event Contractor ceases to maintain or support the Licensed Software (after County has provided written notice of such failure and a thirty (30) day period to cure such failures) for reasons other than County's failure to pay for, or election not to receive, Contractor's Support Services, and no other entity has assumed the obligation to maintain and support the Licensed Software; (e) termination of this Agreement for breach by Contractor and Contractor refuses to provide transitional Services as set forth in Section 29.8 (Termination Transition Services); and (f) any other release conditions that may be specified under the Escrow Agreement. If a Release Condition occurs, County may hire Contractor Personnel to assist County with using and understanding the Source Material without being subject to Section 32.21 (Prohibition Against Inducement or Persuasion).

4.2 NATURAL DEGENERATION

The Parties acknowledge that as a result of the passage of time alone, the deposited Source Material may be susceptible to loss of quality ("**Natural Degeneration**"). For the purpose of reducing the risk of Natural Degeneration, Contractor shall deposit with the Escrow Agent a new copy of all deposited Source Material at least once every three (3) years. In the event the Source Material or any part of it is destroyed or corrupted, upon County's request, Contractor shall provide a replacement copy of the Source Material.

4.3 USE OF SOURCE MATERIAL

Upon the occurrence of a Release Condition County will, upon payment of the duplication cost and other handling charges of the Escrow Agent, be entitled to obtain a copy of such Source Material from the Escrow Agent. Source Material obtained by County under the provisions of this Agreement shall remain subject to every license restriction, proprietary rights protection,

and all other County obligations specified in this Agreement provided, however, County may make such Source Material available to third-parties as needed to assist County in making authorized use of the Licensed Software and/or Interfaces and provided such third-party has first entered into a written agreement containing restrictions at least as protective of the Source Material as this Agreement. County shall be entitled to use the Source Material as needed to remedy the event of release and mitigate any damages arising from such event. Such use will include, but is not limited to, County's right to perform its own support and maintenance, alter or modify the Source Material, and/or obtain the benefits sought under this Agreement. The Escrow Agent's responsibility in the event of a Release Condition will be to cause a copy of the Source Material, in the form as delivered by Contractor, to be promptly delivered to County at the appropriate time. Nothing herein relieves Contractor of its obligation to provide Support Services as required under this Agreement. Except as necessary to effectuate a transition to a new solution, in no event shall County be permitted to grant access to the Source Material to a competitor of Contractor. Likewise, County shall not be permitted to sell or transfer its rights in the Source Material to any other party. When Source Material is not in use, County agrees to keep such Source Material in a locked, secure place. When Source Material resides in a central processing unit, County shall limit access to its authorized employees and consultants who have a need to know in order to support the Licensed Software and/or Interfaces. In the event of a claim to the Source Material, County shall provide Contractor with a written notice outlining the facts upon which County bases its claim that a Release Condition has occurred. Contractor may contest the existence of the Release Condition pursuant to the procedures set forth in Section 27 (Dispute Resolution Procedure) or subject to other judicial proceedings as provided by law.

4.4 PROPRIETARY RIGHTS

County acknowledges that any possession of the Source Material referred to herein is subject to the confidentiality and proprietary provisions of access to any third-party, except to service, maintain, support, repair, operate, modify, or otherwise facilitate and continue the use and operation of the installed Licensed Software as provided herein. Should use of the Source Material as provided in this Section 4 (Escrow of Source Materials) involve the use or practice of any patent, copyright, trade secret, trademark, or other proprietary information in which Contractor has an interest, Contractor, on behalf of itself and its assignees and successors, agrees not to assert a claim for patent, copyright, trade secret, trademark, or other proprietary information infringement against County, provided use of the Licensed Software and Source Material is in accordance with this Agreement.

4.5 COUNTY'S RIGHT TO VERIFY SOURCE MATERIAL

Regardless of whether one of the Release Conditions occurs, County shall have the right, at County's sole expense, to require the Escrow Agent to verify the relevance, completeness, currency, accuracy, and functionality of the Source Material by, among other things, compiling the Source Material and performing test runs for comparison with the capabilities of the Licensed Software. In the event such testing demonstrates the Source Material does not correspond to the Licensed Software, Contractor shall reimburse County for all costs and fees incurred in said verification, compilation, and testing and immediately deposit the correct Source Material with the Escrow Agent.

4.6 AMENDMENT OF ESCROW AGREEMENT

Contractor shall not change the Escrow Agent designated in this Section 4 (Escrow of Source Materials) without County's Approval, which shall not be unreasonably withheld.

4.7 ESCROW MAINTENANCE FEES

There shall be no charge to County for the maintenance of the Escrow for the purpose of this Agreement.

4.8 LIMITATION OF SURVIVAL

The survival of the rights of this Section 4 (Escrow of Source Materials) as provided under Section 29.9 (Survival) shall be limited to three (3) years subsequent to the effective date of a termination of this Agreement.

5. BANKRUPTCY AND LIQUIDATION

In the event that Contractor shall: (1) make an assignment for the benefit of creditors or petition or apply to any tribunal for the appointment of a custodian, receiver, or trustee for all or a substantial part of its assets; (2) commence any proceeding under any bankruptcy, reorganization, arrangement, readjustment of debt, dissolution, or liquidation law or statute of any jurisdiction whether now or hereafter in effect; (3) have had any such petition or application filed or any such proceeding commenced against it in which an order for relief is entered or an adjudication or appointment is made, and which remains undismissed for a period of one-hundred and twenty (120) days or more; (4) take any corporate action indicating its consent to, approval of, or acquiescence in any such petition, application, proceeding, or order for relief or the appointment of a custodian, receiver, or trustee for all or substantial part of its assets; or (5) permit any such custodianship, receivership, or trusteeship to continue undischarged for a period of one-hundred and twenty (120) days or more, causing Contractor or any third-party, including, without limitation, a trustee in bankruptcy, to be empowered under state or federal law to reject this Agreement or any agreement supplementary hereto, County shall have the following rights:

(a) In the event of a rejection of this Agreement or any agreement supplementary hereto, County shall be permitted to retain and use any back-up or archival copies of the Licensed Software under this Agreement, as provided under Section 365(n) of the United States Bankruptcy Code (11 U.S.C. Section 365(n)) for the purpose of enabling it to mitigate damages caused to County because of the rejection of this Agreement;

(b) In the event of a rejection of this Agreement or any agreement supplementary hereto, County may elect to retain its rights under this Agreement or any agreement supplementary hereto as provided in Section 365(n) of the Bankruptcy Code. Upon written request of County to, as applicable, Contractor or the bankruptcy trustee or receiver, Contractor or such bankruptcy trustee or receiver shall not interfere with the rights of County as provided in this Agreement or in any agreement supplementary hereto to obtain the Source Material(s) from the bankruptcy trustee or from a third-party escrow agent and shall, if requested, cause a copy of such Source Material(s) to be available to County; and

(c) In the event of a rejection of this Agreement or any agreement supplementary hereto, County may retain its rights under this Agreement or any agreement supplementary hereto as provided in Section 365(n) of the Bankruptcy Code without prejudice to any of its rights under Section 503(b) of the Bankruptcy Code.

6. CONTINUOUS LICENSED SOFTWARE SUPPORT

If Contractor assigns this Agreement, is acquired, or is otherwise controlled by another individual or entity (collectively referred to as a "**Successor Event**"), such individual or entity shall continue to provide Support Services in accordance with this Agreement through the Support Term. If, subsequent to the Successor Event, the Licensed Software is not supported to at least the same level that Contractor supported the Licensed Software prior to the Successor Event, because, for example, Contractor's assignee chooses to support other products with similar functions or does not otherwise properly staff the support for the Licensed Software, County, at its sole option, may elect to transfer the license of the Licensed Software, without cost or penalty, to another similar product ("**Replacement Product**") within Contractor's assignee's or successor's product offering. For purposes of this Section 6 (Continuous Licensed Software Support), the term "controlled" shall mean the legal right to elect a majority of the directors of a corporation or similar officers of any other entity or to determine an entity's general management policies through contract or otherwise. The assignee or successor, by taking benefit (including acceptance of any payment under this Agreement) ratifies this Agreement. All terms and conditions of this Agreement shall continue in full force and effect for the Replacement Product. In addition, the following terms and conditions shall apply if County elects to transfer this license to a Replacement Product:

(a) Any prepaid maintenance and support shall transfer in full force and effect for the balance of the Replacement Product's maintenance and support term (or equivalent service) at no additional cost. If the prepaid moneys are greater than the Replacement Product's maintenance and support fee for the same term, the credit balance will be applied to future maintenance and support fees or returned to County, at its option;

(b) Any and all software offered separately and needed to fulfill the original Licensed Software's level of functionality shall be supplied by Contractor's assignee or successor without additional cost or penalty and shall not affect the calculation of any maintenance and support fees;

(c) Any services required for implementation of the Replacement Product shall be provided by Contractor's assignee or successor without additional cost or penalty;

(d) Contractor shall provide to County reasonable training for purposes of learning the Replacement Product at no cost to County;

(e) All license terms and conditions shall remain as granted herein with no additional fees imposed on County; and

(f) The definition of Licensed Software shall then mean and include the Replacement Product.

7. THIRD-PARTY PRODUCTS WITH INDEPENDENT CONDITIONS

In the event Contractor provides any Third-Party Product to County in connection with this Agreement for which Contractor is obligated to ensure that County accepts and is bound by third-party terms and conditions ("**Third-Party Product With Independent Conditions**"), the following shall apply: (a) Contractor shall specifically identify in writing all Third-Party Product With Independent Conditions in Exhibit B (EHR System Software Components) or the applicable Statement of Work; (b) Contractor shall attach to Exhibit FF (Independent Conditions) or the applicable Statement of Work written copies of all third-party license agreements applicable to County; and (c) Contractor warrants that: (i) it has the right to license any Third-Party Product With Independent Conditions licensed to County under this Agreement; (ii) to the best of Contractor's knowledge, the Third-Party Product With Independent Conditions does not, and the use of the Third-Party Product With Independent Conditions by County as contemplated by this Agreement will not, infringe any intellectual property rights of any third-party; and (iii) unless specifically provided otherwise herein, County shall have no obligation to pay any third-party any fees, royalties, or other payments for County's use of any Third-Party Product With Independent Conditions in accordance with the terms of this Agreement. Unless a license for the Third-Party Product With Independent Conditions is specifically Approved by County and such license is provided in Exhibit FF (Independent Conditions) or the applicable Statement of Work, such Third-Party Product shall be deemed Integral Third-Party Software until such independent conditions are specifically provided to County by Contractor and Approved by County. Prior to obtaining County's Approval as to the independent conditions, Contractor shall obtain, at Contractor's sole cost and expense, all license rights necessary for County's use of the Third-Party Product With Independent Conditions in accordance with this Agreement, including support and maintenance costs. Upon Approval of the Third-Party Product with Independent Conditions, the item will be added to Exhibit C (Fees; Contractor Professional Services Rates) or as otherwise agreed to in writing by the Parties. To the extent County has agreed to the independent conditions associated with a Third-Party Product, and there is a conflict between the terms of this Agreement and the independent conditions, the independent conditions will control to the extent permitted by law or contract, Contractor shall pass through to County the warranties for the Third-Party Product With Independent Conditions.

8. HARDWARE

To the extent County will purchase any hardware or other equipment from Contractor (collectively, "**Hardware**"), such Hardware shall be specifically identified in Exhibit D (Hardware) or the applicable Statement of Work, including all applicable fees and costs. Title to each item of Hardware shall pass to County on delivery to the facility designated by County and payment in full of the fees associated with that particular item. Contractor shall be responsible for customary and appropriate product packaging, freight charges, insurance, and delivery of the Hardware to the County designated FOB destination. Contractor shall ensure delivery of the Hardware within the times prescribed in Exhibit D (Hardware) or the applicable Statement of Work. All Hardware and the parts therein shall be new and shall not contain any refurbished or used parts.

9. SERVICES AND DELIVERABLES

9.1 SERVICES

Contractor will provide the Services, fulfill the obligations to County, produce and deliver the Deliverables, achieve the Milestones, and retain the responsibilities set forth in this Agreement and described in one or more sequentially numbered, written statements of work that specifically reference this Agreement and are attached hereto as Exhibit A (Statements of Work) or incorporated by Amendment as part of Exhibit A (Statements of Work) (each, a "**Statement of Work**"). Each new Statement of Work shall be in the general form set forth in Exhibit P (Form Statement of Work). The implementation under this Agreement is structured into Clusters to provide for a well-managed and organized execution of the Services and it is anticipated and understood that the Services may be adapted through additional Statement(s) of Work and modifications to existing Statement(s) of Work as additional details are defined by the Parties. Contractor shall provide the Services without causing a material disruption of County's operations.

9.2 STATEMENT(S) OF WORK

Each Statement of Work, other than those attached as Exhibit A (Statements of Work), which are effective on the Effective Date, will be effective and become valid and enforceable only as to Optional Work when a Change Order is executed in accordance with Section 13.3 (Change Orders, and in all other instances, when an Amendment is approved by the Board. If a conflict arises between the body of this Agreement and a Statement of Work or other Exhibit, Attachment, or Schedule hereto, except with regard to an express Amendment to a specific section of this Agreement, the body of this Agreement shall control. Each Statement of Work shall be deemed, upon its execution, to incorporate the terms and conditions of this Agreement.

9.3 PROJECT CONTROL DOCUMENT AND PROJECT SCHEDULE

9.3.1 PROJECT CONTROL DOCUMENT AND PROJECT SCHEDULE

Contractor shall implement the Licensed Software, Third-Party Products, and/or Hosting Software in accordance with the Project Control Document and Project Schedule. The Project Schedule shall, at a minimum, include the following items:

(a) Deliverable number;

(b) Description;

(c) Due date;

(d) Associated Deliverable;

(e) Milestone; and

(f) Any other items required by County under this Agreement.

9.3.2 KEY DELIVERABLES

Exhibit A.25 (Project Control Document) shall specify certain Deliverables as Key Deliverables, as determined by County. A Key Deliverable shall be deemed completed for purposes of this Section 9.3.2 (Key Deliverables) on the earliest date that all of the tasks, subtasks, Deliverables, goods, and Services required for completion of such Key Deliverable are completed and delivered to County, provided that all of such Services required for completion of such Key Deliverable are thereafter Approved in writing by County pursuant to Section 9.13 (Approval of Key Deliverables) without prior rejection by County or significant delay in County's Approval thereof, which delay is the result of Contractor's failure to deliver such tasks, subtasks, Deliverables, goods, and Services in accordance with the terms hereof. The determination of whether each Key Deliverable has been so completed and so Approved, and of the date upon which such Key Deliverable was completed, shall be made by the County Project Director as soon as practicable in accordance with Section 9.13 (Approval of Key Deliverables) after County is informed by Contractor that such Key Deliverable has been completed and is given all the necessary information, data, and documentation to verify such completion. A failure by Contractor to complete any Key Deliverable by the Credit Due Date for such Key Deliverable (as such date may be modified pursuant to Section 13 (Changes to Agreement)), including, without limitation, following delivery of a notice under Section 10.2.3 (Alert Reports), shall be subject to the provisions of Section 14.3.2 (Credits to County), Section 14.3.3 (Termination for Failure to Complete Key Deliverable) and Section 29.2 (Termination for Material Breach).

9.4 IMPLEMENTATION SERVICES

Contractor shall provide Implementation Services, including Licensed Software, Third-Party Products, and Hosting Software setup, installation, testing, training and other Services required for successful implementation of the EHR System, as provided in this Agreement and specified in Exhibit A (Statements of Work).

Contractor shall provide to County the transition-in and migration Services described in Exhibit A (Statements of Work), in accordance with the Project Schedule. Contractor shall provide the transition-in and migration Services without materially (a) disrupting or adversely impacting the business or operations of County, (b) degrading the Services being provided, or (c) interfering with the ability of County to obtain the benefit of the Services, except as may be otherwise provided in Exhibit A (Statements of Work). Unless otherwise stated in the Agreement, the transition-in and migration Services shall not adversely impact or delay any obligations or liabilities of Contractor under this Agreement.

Contractor and/or County will amend Exhibit B (EHR System Software Components) in order to: (i) add new Licensed Software Modules and/or components; (ii) revise the Licensed Software descriptions, and (iii) update the Licensed Software and Module version numbers, provided, however, no Licensed Software Module or component may be removed from or added to Exhibit B (EHR System Software Components) except in accordance with this Agreement and upon Approval of the County Project Director. All such changes to Exhibit B (EHR System

Software Components) shall be provided in accordance with Section 13 (Changes to Agreement).

9.5 KNOWLEDGE TRANSFER AND TRAINING

9.5.1 KNOWLEDGE TRANSFER

The Services shall include all knowledge transfer, training, and education activities as set forth in Exhibit A.22 (Training and Knowledge Transfer Statement of Work). Contractor shall provide to County, as part of the knowledge transfer, unlimited access to the computer based training course material through the end of the fifth (5th) Contract Year.

9.5.2 TRAINING

As part of the Services, Contractor shall provide the training to County and its personnel, at a location to be designated by County, set forth in the applicable Statement(s) of Work at no additional charge to County. In addition, County may participate, at no additional charge, in any training seminars that may be held, at Contractor's discretion, for the benefit of all licensees.

9.6 INTERFACES

Contractor acknowledges and agrees that County may Interface, integrate, and use the Licensed Software, Third-Party Products, and/or Hosting Software with other systems owned or licensed by or for County or a third-party, so as to permit those systems to Interoperate, whether by use of calls, exchange of data, link editing or otherwise. Contractor shall not obtain any ownership interest in those other systems merely because they were Interfaced, integrated, or used with any Licensed Software. Contractor shall be responsible for developing and delivering the Interfaces, if any, identified in a Statement(s) of Work at no additional cost to County beyond the applicable cost in each Statement of Work, which Interfaces shall include but not be limited to Interfaces to third-party software and hardware identified in Exhibit M (Interfaces). All such required Interfaces shall be part of the Deliverables to be provided by Contractor.

9.7 SUPPORT SERVICES

Contractor shall provide the Licensed Software and Third-Party Products support and application maintenance services ("**AMS Services**") described in this Section 9.7 (Support Services) and the applicable Statement(s) of Work (collectively, the "**Support Services**"). There shall be no additional charge to County for on-site Support Services to remedy a breach of warranty, to correct a failure of the Licensed Software or Third-Party Products to conform to the Specifications, or to fulfill Contractor's obligations pursuant to this Section 9.7 (Support Services). If Contractor does not otherwise agree that onsite Support Services are required, then the onsite Support Services under this Section 9.7 (Support Services) will be provided upon request from DHS CIO or DHS CMIO or their individual designee(s). Notwithstanding the foregoing, as to Integral Third-Party Software and Third-Party Products, Contractor is not responsible for making changes to Integral Third-Party Software or Third-Party Products, but is responsible for coordinating and managing with the appropriate third-party such actions to

correct a failure of the Integral Third-Party Software or Third-Party Products consistent with its obligations under this Agreement.

9.7.1 SUPPORT RESPONSIBILITIES

In addition to any warranty obligations of Contractor under this Agreement, Contractor shall:

(a) Correct any failure of the Licensed Software, Services, and Deliverables to perform in accordance with the Specifications, including without limitation, defect repair, programming corrections, and remedial programming, and provide such services and repairs required to maintain the Licensed Software, Services, and Deliverables so that they operate properly and in accordance with the Specifications. As to Third-Party Products, Contractor is responsible for coordinating and managing with the appropriate third-party such actions to correct any failure of the Third-Party Products to perform in accordance with their specifications, and required to maintain the Third-Party Products so that such Third-Party Products operate properly together with the Licensed Software, Services, and Deliverables in accordance with the Specifications;

(b) Provide Support Services for, and respond to, Support Requests in accordance with Exhibit E (Service Levels and Performance Standards);

(c) Provide unlimited telephone support twenty-four (24) hours a day, seven (7) days a week;

(d) Provide online access to technical support bulletins and other user and self-help support information and forums; and

(e) Provide invitations for County personnel to attend and participate in, at no additional cost (excluding travel expenses) to County (i) for its Cerner Health Conference, Contractor will provide DHS CIO with twenty (20) passes per year to distribute to County personnel, and (ii) participation by County representatives in the following groups or events, including those that determine or influence Contractor's priorities for development of future Enhancements of the Licensed Software:

(a) County will be a member of Contractor's Academic Advisory Board; and

(b) DHS's CIO will also be granted a three (3) year term for the next term of Contractor's Academic Advisory Board beginning after the request of DHS's CIO.

9.7.2 CONTRACTOR'S REVISIONS

(a) Substantial Equivalence. Contractor may from time to time make material Revisions to the Licensed Software. In the event of such Revisions, (a) the

new Revision of the Licensed Software will, as to each function, (i) provide at least substantially equivalent functional results, (ii) maintain the level or quality of Services that County previously received, and (iii) shall continue to comply with all of the requirements of this Agreement, and (b) County shall be provided written notice at least sixty (60) days in advance of the general availability of any such Revision. Notwithstanding the foregoing, County may Approve a Revision to the Licensed Software that does not comply with the requirements of this Section 9.7.2(a) (Substantial Equivalence) if Contractor demonstrates to County that the Revision (1) is beneficial to the overall functionality or performance of the Licensed Software, (2) does not result in a material diminution of a feature or function that is deemed important to County's ongoing operations (e.g., the ability to timely file cost reports), and (3) does not result in the inability to maintain Interfaces with a third-party systems already Interfaced to the Licensed Software. In the event Contractor makes a Revision in breach of this Section 9.7.2(a) (Substantial Equivalence), Contractor shall provide the software, Services, and equipment required by County to provide the substantially equivalent functional result at no cost to County. Contractor's obligation under this Section 9.7.2(a) (Substantial Equivalence) does not apply to Integral Third-Party Software that is not embedded within the Licensed Software.

(b) No Material Adverse Effects. If within the later of thirty (30) days after (1) Acceptance in a Production Environment of a Revision, or (2) the first fiscal year end close after being placed into Productive Use, a material adverse effect on functionality or operation of the Licensed Software is identified, including, but not limited to, a failure to comply with the requirements of this Agreement, or compatibility with County's technical, business or regulatory requirements, including, without limitation, hardware, software, or browser configurations, then County may in its sole discretion reject such changes, and remain on the current Revision of the Licensed Software and continue to receive Support Services as required hereunder, until such time as Contractor has demonstrated the material adverse effects in the Revision have been corrected and County is able to implement the Revision without substantial disruption to County's operations.

(c) Delivery and Prior Version Support. During the Support Term, County shall receive access to all new Revisions of the Licensed Software and Hosting Software that Contractor makes available to its other licensees without additional charge as provided in Section 3.2 (Revisions) within thirty (30) days after their General Availability. Notwithstanding the foregoing, Contractor represents, warrants, covenants, and agrees that throughout the Term of this Agreement Contractor shall provide Support Services for the current Version of Licensed Software and the most recent prior two (2) Versions.

9.7.3 SUPPORT NOT TO BE WITHHELD

Support Services under this Agreement will not be withheld due to any dispute arising under this Agreement, another agreement between the Parties, or any other related or unrelated dispute between the Parties.

9.7.4 NO REMOVAL OF DATA

Contractor shall not remove from County's facilities, or retain a copy of, any County Data obtained from, or as a result of access to, County Systems unless that removal or retention is reasonably necessary to perform the Support Services or is otherwise Approved in writing by County.

9.8 OPTIONAL WORK

Upon County's written request and mutual approval pursuant to the terms of this Agreement, Contractor shall provide Optional Work, including New Software and Professional Services, in accordance with this Section 9.8 (Optional Work) at the applicable pricing terms set forth in Exhibit C (Fees; Contractor Professional Services Rates).

9.8.1 NEW SOFTWARE

Upon County's written request following Go-Live and mutual agreement, Contractor shall provide to County New Software as part of Optional Work using Pool Dollars, in accordance with any applicable Change Order. Any enhancements and/or modifications to the Licensed Software Requirements resulting from New Software shall be incorporated into, and become part of, the Licensed Software Requirements (Exhibit A.26 (Licensed Software Requirements)). Upon delivery by Contractor, and Acceptance and Approval in writing by County in accordance with the terms of this Agreement, of such New Software, Exhibit C.1 (Optional Work) shall be updated accordingly to add such delivered New Software via a Change Notice or by an Amendment, in each case, in accordance with Section 13 (Changes to Agreement).

All New Software, once Accepted and Approved in writing by County, shall become part of the Licensed Software, and shall be subject to the terms and conditions of this Agreement.

9.8.2 PROFESSIONAL SERVICES

Upon County's written request following Go-Live and mutual agreement, Contractor shall provide to County Professional Services as part of Optional Work using Pool Dollars, including consulting services and/or additional training, in accordance with any applicable Change Order. Specifically, County may from time to time, during the Term of this Agreement, submit to Contractor for Contractor's review written requests for Professional Services using Pool Dollars, including consulting services and/or additional training, for services not included in Implementation Services. County may require that Professional Services be provided on a (1) fixed fee basis, (2) not to exceed basis, (3) time and materials basis, or (4) a combination of the

above. In response to County's request, Contractor shall submit to County for Approval a Statement of Work describing the particular Professional Services and providing a response consistent with the payment method required by County to provide such Professional Services, calculated based on the Fixed Hourly Rate and other pricing terms set forth in Exhibit C (Fees; Contractor Professional Services Rates) and elsewhere in the Agreement. County and Contractor shall agree on the Change Order developed using the Statement of Work, which shall at a minimum include the tasks and Deliverables to be performed, Acceptance Tests, as applicable, and the pricing for such Professional Services. Any enhancements and/or modifications to the Licensed Software Requirements resulting from Professional Services shall be incorporated into, and become part of, the Licensed Software Requirements. Upon completion by Contractor, and Acceptance and Approval in writing by County in accordance with the terms of this Agreement, of such Professional Services, Exhibit C.1 (Optional Work) shall be updated accordingly to add such delivered Professional Services via a Change Notice or by an Amendment, in each case, in accordance with Section 13 (Changes to Agreement).

9.9 TIME

Time is of the essence with regard to Contractor's performance of the Services.

9.10 CONTRACTOR ACCESS TO COUNTY FACILITIES

Contractor and Contractor Personnel may be granted access to County facilities, subject to compliance with County's standard administrative and security requirements and policies (disclosed to Contractor or Contractor Personnel in writing or by other means generally used by County to disseminate such information to employees or contractors, including electronic means), for the purpose of performing the Services. Access to County facilities shall be restricted to normal County business hours. Access to County facilities outside normal business hours must be Approved in advance by County's Project Manager, which Approval will not be unreasonably withheld. Contractor shall have no tenancy, license or any other property rights or interest in County facilities. While present at County facilities, Contractor Personnel shall be accompanied by County personnel, unless otherwise specified prior to such event by County's Project Manager or his or her designee. Contractor shall not in any way physically alter or improve any County facility without the prior written Approval of County in its sole and absolute discretion. All Contractor Personnel assigned to County facilities are required to have a County Identification ("**ID**") badge on their person and visible at all times. Contractor bears all expense of the badging. Furthermore, with respect to badging:

(a) Contractor is responsible to ensure that Contractor Personnel have obtained a County ID badge before they are assigned to work in a County facility. Contractor Personnel may be asked to leave a County facility by a County representative if they do not have the proper County ID badge on their person.

(b) Contractor shall notify the County within one (1) Business Day when Contractor Personnel assigned on-site at a County facility is terminated from working under this Agreement. Contractor shall retrieve and return the County ID badge of the Contractor Personnel to the County as soon as practicable, but in no event more than three (3)

Business Days, unless the County agrees to an extension of such time, after the Contractor Personnel has been terminated from working under this Agreement.

(c) If County requests the removal of Contractor Personnel, Contractor shall retrieve and return the County ID badge, if applicable, of the Contractor Personnel to the County as soon as practicable, but in no event more than three (3) Business Days, unless the County agrees to an extension of such time, after the Contractor Personnel has been removed from working under this Agreement.

9.11 DAMAGE TO COUNTY FACILITIES

County shall repair, or cause to be repaired, at Contractor's own cost, any and all damage to County facilities, including, without limitation, County's buildings, grounds, equipment, and furniture, to the extent caused by Contractor or Contractor Personnel. Contractor shall notify County immediately of any and all damages. All reasonable costs incurred by County, as determined by County, for such repairs shall be repaid by Contractor by cash payment upon demand, or without limitation of County's other rights and remedies provided by law or under this Agreement, County may deduct such costs from any amounts due to Contractor from County under this Agreement.

9.12 UNAPPROVED WORK

If Contractor provides any tasks, subtasks, Deliverables, goods, services, or other work to County other than those specified in this Agreement, including a Statement of Work, or if Contractor provides such items requiring County's prior written Approval without first having obtained such written Approval, the same shall be deemed to be a gratuitous effort on the part of Contractor, and Contractor shall have no claim whatsoever against County for such tasks, subtasks, Deliverables, goods, services, or other work.

9.13 APPROVAL OF KEY DELIVERABLES

All Key Deliverables provided by Contractor under this Agreement must have the written Approval of the County Project Director as described in this Section 9.13 (Approval of Key Deliverables). Upon completion of each Key Deliverable, Contractor shall fully complete a Key Deliverable Acceptance Certificate (hereinafter "**Acceptance Certificate**"), as set forth in Exhibit A.27 (Acceptance Certificate), submit it to the County Project Manager for his/her review, Approval, and signature. In the event that the County Project Manager Approves such Acceptance Certificate and the Services described therein, the County Project Manager will then sign such Acceptance Certificate and forward it to the County Project Director for his/her review, Approval, and signature. Each Acceptance Certificate must have the Approval of the County Project Director, as evidenced by the County Project Director's signature on the applicable Acceptance Certificate before Contractor can invoice for payment. In the event County Project Manager or County Project Director does not Approve the Acceptance Certificate, the County Project Manager or County Project Director, as applicable, shall provide the Contractor written notice identifying the reasons for non-Approval. In no event shall County be liable or responsible for any payment prior to such written Approval. Furthermore, County reserves the right to reject any Key Deliverable not Approved by County in accordance with this Section 9.13 (Approval of Key Deliverables).

9.14 INTERFERING ACTS

In the event of Contractor's non-performance of a specific obligation, Contractor shall be excused from its responsibility to perform such obligation under this Agreement if and only to the extent such non-performance of the specific obligation is caused primarily by (a) County's material breach of its obligations under the Agreement, or (b) an act or omission of County that is Finally Determined to prevent or significantly impair Contractor's ability to perform the obligation. Upon the occurrence of acts or omissions by County in breach of County's performance obligations under the Agreement which have been determined by Contractor to be likely to adversely impact its ability to deliver or meet such specific obligation, Contractor shall promptly, but in no event longer than fourteen (14) days Contractor knew or should have known of the occurrence, advise the County Project Director and County Project Manager of such occurrence in writing and identify the reason for Contractor's inability to perform its obligation as a result of County's failure to perform its obligations under this Agreement. Nothing in the foregoing shall (i) relieve Contractor of any portion of liability Finally Determined by a court to be Contractor's arising from a breach of contract claim as to such failure to perform, (ii) preclude County from asserting such failure by Contractor to perform an obligation under this Agreement as a basis for County to terminate the Agreement for cause if subsequently discovered facts demonstrate the failure was not caused by County's failure to perform its obligations under this Agreement, or (iii) preclude County from asserting such failure by Contractor to perform an obligation under this Agreement as a basis for County to terminate the Agreement for cause if Contractor conduct, not caused by County's failure to perform its obligations under this Agreement, contributing to the failure is determined to be one of numerous breaches of its duties or obligations under the Agreement which in the aggregate are material.

10. PROJECT TEAM; REPORTS AND MEETINGS

10.1 PROJECT TEAM

10.1.1 PROJECT DIRECTOR

Contractor shall assign a "**Contractor Project Director**" who shall be dedicated to the County account full-time. The initial County Project Director is specified in Exhibit X (County Key Personnel). The Contractor Project Director shall be responsible for Contractor's performance of all its tasks, subtasks and other Services and ensuring Contractor's compliance with this Agreement. The initial Contractor Project Director, along with the location of the Contractor Project Director, is specified in Exhibit J (Contractor Key Employees). Contractor shall not reassign or replace any Contractor Project Director during the thirty-six (36) months from the Effective Date of the Agreement or Contractor Key Employees during the time of their Continuity Commitment as set forth in Exhibit J (Contractor Key Employees), unless: (a) Contractor obtains County's consent in writing (with respect to Contractor Key Employees which such consent shall not be unreasonably withheld) to such reassignment or replacement; or (b) the individual (i) voluntarily resigns from Contractor and is not rehired by Contractor for a period of no less than six (6) months, (ii) is dismissed by Contractor for (1) misconduct (e.g., fraud, drug abuse, theft), or (2) unsatisfactory performance in respect of his or her duties and

responsibilities to County or Contractor, (iii) is removed from the Contractor Personnel pursuant to Section 10.1.5 (Conduct of Contractor Personnel), (iv) is unable to work due to his or her death or disability, or (v) as to Contractor Key Employees (excluding the Contractor Project Director), requests reassignment under compassionate circumstances (e.g., relocation of a spouse) (subparts (a) and (b) are collectively referred to as "**Approved Reassignments Section 10.1.1**"). In the event the Contractor Project Director leaves after the thirty-six (36) month period above, Contractor must provide a replacement that has the same or better experience or skills as the Contractor Project Director being replaced, County shall have the right to Approve the replacement, a mutually agreed transition and knowledge transfer plan shall be developed and Approved by County, and, provided the Contractor Project Director is still employed by Contractor, Contractor shall make the former Contractor Project Director available to County to address significant issues as to which the former Contractor Project Director has a unique understanding or perspective based on his or her engagement at County.

10.1.2 CONTRACTOR PROJECT MANAGER

Contractor shall assign a "**Contractor Project Manager**" to manage Contractor's performance of the Services. The initial Contractor Project Manager shall be listed in the applicable Statement of Work. The Contractor Project Manager shall be responsible for Contractor's day-to-day activities under this Agreement and for providing County reports as provided in Section 10.2 (Reports and Meetings). The Contractor Project Manager shall also serve as Contractor's liaison with County, assign and schedule Contractor Personnel to perform all of the Services required by County under this Agreement, and act as Contractor's initial representative for dispute resolution. Contractor shall not reassign or replace the Contractor Project Manager during the thirty-six (36) months from the Effective Date of the Agreement, unless: (a) Contractor obtains County's consent in writing to such reassignment or replacement; or (b) the individual (i) voluntarily resigns from Contractor and is not rehired by Contractor for a period of no less than six (6) months, (ii) is dismissed by Contractor for (1) misconduct (e.g., fraud, drug abuse, theft), or (2) unsatisfactory performance in respect of his or her duties and responsibilities to County or Contractor, (iii) is removed from the Contractor Personnel pursuant to Section 10.1.5 (Conduct of Contractor Personnel), (iv) is unable to work due to his or her death or disability, or (v) as to Contractor Project Manager (excluding the Contractor Project Director), requests reassignment under compassionate circumstances (e.g. relocation of a spouse) (subparts (a) and (b) are collectively referred to as "**Approved Reassignments Section 10.1.2**"). In the event the Contractor Project Manager leaves after the thirty-six (36) month period above, Contractor must provide a replacement that has the same or better experience or skills as the Contractor Project Manager being replaced, County shall have the right to Approve the replacement, a mutually agreed transition and knowledge transfer plan shall be developed and Approved by County, and, provided the Contractor Project Manager is still employed by Contractor, Contractor shall make the former Contractor Project Manager available to County to address significant issues as to which the former Contractor Project Manager has a unique understanding or

perspective based on his or her engagement at County. Contractor shall manage the Services in accordance with the Project Management Institute standards or other County Approved IT project management methodology, as determined applicable by County.

10.1.3 COUNTY PROJECT MANAGER

County shall assign a "**County Project Manager**" who will be responsible for County's day-to-day activities with respect to such project under this Agreement. The initial County Project Manager shall be listed in the applicable Statement of Work. The County Project Manager shall serve as County's initial representative for dispute resolution. The County Project Manager shall respond to the Contractor Project Manager's reports to the extent that a response is appropriate as determined by the County Project Manager. All Services provided by Contractor hereunder shall be subject to Approval by the County Project Manager. Any change of the County Project Manager shall be in County's sole discretion; provided County shall notify Contractor in writing of any change. The County Project Manager is not authorized to make any changes in any of the terms and conditions of this Agreement and is not authorized to further obligate County in any respect whatsoever.

10.1.4 CONTRACTOR KEY EMPLOYEES

The Contractor Key Employees shall be dedicated to the County account as set forth in Exhibit J (Contractor Key Employees). The initial Contractor Key Employees are those individuals listed in Exhibit J (Contractor Key Employees). Except for a replacement or reassignment of the Contractor Key Employees due to the occurrence of an Approved Reassignment, Contractor shall not reassign or replace any Contractor Key Employee, if such reassignment or replacement would materially disrupt County's operations, until the completion of any projects to which the Contractor Key Employee is assigned. No Approved Reassignment of a Contractor Key Employee shall occur without at least thirty (30) calendar days (or as reasonably practical under the circumstances) prior written notice to County. Upon an Approved Reassignment of a Contractor Key Employee, the Parties agree to update Exhibit J (Contractor Key Employees) with the name of the agreed upon replacement individual, as appropriate via a Change Notice in accordance with Section 13.2 (Change Notices).

10.1.5 CONDUCT OF CONTRACTOR PERSONNEL

While at the County locations, all Contractor Personnel shall (a) comply with reasonable requests, standard rules, policies, and regulations of County communicated (disclosed to Contractor or Contractor Personnel in writing or by other means generally used by County to disseminate such information to employees or contractors, including electronic means) to Contractor regarding personal and professional conduct (including the wearing of business attire commensurate with County's standards and adhering to County regulations and general safety practices or procedures) generally applicable to such County

locations, and (b) otherwise conduct themselves in a professional and businesslike manner.

The County Project Director or the County Project Manager shall have the right to Approve or request the removal of any Contractor Personnel assigned to perform under this Agreement. Should County be dissatisfied with the performance, competence, responsiveness, capabilities, cooperativeness, or fitness for a particular task of any Contractor Personnel assigned by Contractor to perform Services under this Agreement, County may request the replacement of such Contractor Personnel. The replacement request shall be in writing, and, upon receipt of the request, Contractor shall make reasonable efforts to furnish a qualified and acceptable replacement within fifteen (15) Business Days. In the event Contractor should ever need to remove any Contractor Personnel from performing Services under this Agreement, Contractor shall provide County with adequate notice, except in circumstances in which such notice is not possible, and shall work with County on a mutually agreeable transition plan so as to provide an acceptable replacement and ensure project continuity. Such transitioning to replacement Contractor Personnel shall be at no additional cost to County. Contractor agrees that all Contractor Personnel assigned to perform under this Agreement must have experience and suitable training and skills in the areas in which they are responsible for performing the tasks to which they will be assigned under this Agreement. In the event that the actions or inactions of Contractor Personnel create additional work in connection with the performance of the Services that would have otherwise been unnecessary in the absence of such action or inaction, Contractor shall perform all such additional work at no additional charge to County, unless such action or inaction is demonstrated by Contractor to be at the direction of County. In addition, Contractor represents and warrants that it will take all commercially reasonable steps to assure continuity over time of the membership of the group constituting Contractor Personnel. Contractor shall promptly fill any Contractor Personnel vacancy with Contractor Personnel having qualifications at least equivalent to those of the Contractor Personnel being replaced. In the event Contractor replaces Contractor Personnel, all transition tasks, including, but not limited to training, knowledge transfer, and other time involved with the replacement Contractor Personnel becoming familiar with County and the Services, shall be at no additional cost to County. Additionally, in order to ensure a smooth transition between replacement and former Contractor Personnel, Contractor shall use reasonable effort to make the replacement Contractor Personnel available to shadow the Contractor Personnel to be replaced for a period of not less than ten (10) Business Days. During such shadow period, County shall only be responsible for the charges associated with the Contractor Personnel to be replaced.

10.1.6 COUNTY PERSONNEL

All County personnel assigned to this Agreement shall be under the exclusive supervision of County. Contractor understands and agrees that all such County personnel are assigned only for the convenience of County. Contractor hereby represents that its price, Project Schedule, and performance hereunder are based

solely on the work of Contractor's personnel, except as otherwise expressly provided in this Agreement.

10.2 REPORTS AND MEETINGS

10.2.1 REPORTS

The Contractor Project Manager and County Project Manager, as defined in Section 10.1.3 (County Project Manager), shall communicate at least once every two (2) weeks (the "**Status Report**") about the work in progress. The communications shall include a conference call or an in-person meeting (the "**Status Meeting**") and a report from the appropriate Contractor Personnel regarding:

(a) Period covered by the report;

(b) Tasks, subtasks, Deliverables, goods, and Services scheduled for the reporting period which were completed;

(c) Tasks, subtasks, Deliverables, goods, and Services scheduled for the reporting period which were not completed;

(d) Tasks, subtasks, Deliverables, goods, and Services not scheduled for but completed in the reporting period;

(e) Tasks, subtasks, Deliverables, goods, and Services scheduled to be completed in the next reporting period;

(f) Summary of project status as of reporting date;

(g) Updated Key Deliverable chart;

(h) Issues to be resolved;

(i) Issues resolved;

(j) Updates on any scheduling and Milestones;

(k) Hours worked and expenses incurred;

(l) Updates on knowledge transfer, training, education, and validated effectiveness; and

(m) Any other information that County or Contractor may, from time-to-time, reasonably request in writing that Contractor or County, as the case may be, may deem appropriate.

10.2.2 QUARTERLY REVIEW MEETINGS

Contractor and County shall, at quarterly intervals or such other time periods mutually agreed to by the Parties, hold a review meeting at County's offices, or at such other place as is mutually agreed to by the Parties, to review the performance of the Licensed Software, Third-Party Products, Hosting Software, Services, and Service Levels (as defined in Section 11 (Service Levels)); discuss fee and expense issues; and address such other issues as may be relevant at the time. The Contractor Project Manager (and senior executive personnel from the Contractor who attend) and Contractor's subject matter experts as determined by the meeting agenda shall attend at the sole cost of Contractor.

10.2.3 ALERT REPORTS

Contractor shall promptly notify County in writing (i.e., e-mail or facsimile transmission) on becoming aware of any change or problem that would negatively impact completion or performance of the Licensed Software, Third-Party Products, Hosting Software, Services, and/or Deliverables, the progress of tasks assigned under a Statement of Work, or any schedule in a Statement of Work. The written notice shall include a detailed description of the relevant change or problem and shall be provided to the County Project Manager and County Project Director.

11. SERVICE LEVELS

Contractor represents and warrants that, when installed on the Hardware and the Recommended Configuration and operated in conformance with the terms of this Agreement, the Licensed Software, Hosting Software, Third-Party Products and/or Services (as applicable) shall achieve the service levels ("**Service Levels**") set forth in Exhibit E (Service Levels and Performance Standards), any applicable Statement of Work, and in this Agreement.

12. ACCEPTANCE

12.1 ACCEPTANCE CRITERIA

The Licensed Software, Third-Party Products, Hosting Software, Services, Hardware, Deliverables, and Milestones (if the Statement of Work provides for Milestones) may be subject to acceptance testing by County, in its sole discretion, to verify that they satisfy the acceptance criteria mutually agreed to by the Parties, as developed in accordance with the applicable Statement(s) of Work and this Section 12 (Acceptance) (the "**Acceptance Criteria**"). Such Acceptance Criteria shall be based, at a minimum, on conformance of the Licensed Software, Third-Party Products, Hosting Software, Services, Hardware and Deliverables, operating on the Recommended Configuration and Hardware, to the Specifications and the capability of the Licensed Software, Third-Party Products, Hosting Software, Services, Hardware and Deliverables, operating on the Recommended Configuration and Hardware, to (a) fully support the achievement of Meaningful Use of Certified EHR Technology at each stage of the Meaningful Use requirements as provided in this Agreement, and (b) enable the protection of all Protected Health Information as provided in this Agreement.

12.2 ACCEPTANCE TESTS

When Contractor notifies County that the Licensed Software Third-Party Products, and Hosting Software has been implemented as required under the relevant Statement(s) of Work or that a Service, Deliverable, or Milestone (if the Statement of Work provides for Milestones) has been completed, County may, in its sole discretion, elect to test or evaluate the related Licensed Software, Third-Party Products, Hosting Software Services, Deliverables, and/or Milestones to determine whether they comply in all material respects with the Acceptance Criteria and the whether the EHR System, as a whole, is operating in accordance with the Specifications. Testing will be performed at various stages of the implementation as set forth in the Statement of Work, or as otherwise deemed appropriate by the Parties.

County and/or Contractor, as set forth in a Statement of Work or testing plan, shall conduct all tests (hereinafter "**Acceptance Test(s)**") specified in this Section 12.2 (Acceptance Tests) and in Exhibit A (Statements of Work). Such Acceptance Tests shall include, without limitation, the following:

(a) Installation Test: to validate that all installation tests have been completed.

(b) Initial Component Test: to determine whether the Licensed Software and all components of the EHR System, including Hardware, have been properly installed and are operating in accordance with applicable Specifications.

(c) Integration Test: to confirm that the Licensed Software and all components of the EHR System, including Hardware, operate properly in an integrated fashion and meet all applicable Specifications.

(d) Performance Verification Test: to test the same functionality as the Integration Test using actual data from County's day-to-day operations and confirm that the Licensed Software shall operate in the Production Environment without Errors.

For each of these tests, Contractor shall provide County testing scenarios consistent with Contractor's Best Practices for the applicable Licensed Software, Service, Hardware, Deliverable, and/or Milestone.

12.3 PRODUCTIVE USE

The Licensed Software, Third-Party Products, and Hosting Software shall achieve "**Go-Live**" and be ready for Productive Use when the County Project Director, or his/her designee, Approves in writing (a) Contractor's transition of the Licensed Software, Third-Party Products, and/or Hosting Software to the Production Environment, (b) documented results provided by Contractor certifying successful transition of the Licensed Software, Third-Party Products, and Hosting Software to the Production Environment and operation of the EHR System in accordance with the Specifications, and (c) any other pre-Productive Use testing requirements agreed to in writing by the Parties.

12.4 LICENSED SOFTWARE USE

Following Licensed Software, Third-Party Products, and Hosting Software installation by Contractor and prior to Final Acceptance by County, County shall have the right to use, in a Productive Use mode, any completed portion of the Licensed Software, Third-Party Products, and/or Hosting Software without any additional cost to County where County determines that it is necessary for County operations. Such Productive Use shall not restrict Contractor's performance under this Agreement and shall not be deemed Acceptance or Final Acceptance of the Licensed Software, Third-Party Products, and/or Hosting Software. If such use continues for more than one hundred twenty (120) days, then County shall stop using the Licensed Software, Third-Party Products, and/or Hosting Software in Productive Use or shall agree with Contractor to a schedule for Acceptance.

12.5 FINAL ACCEPTANCE

12.5.1 CONDUCT PERFORMANCE VERIFICATION

Following successful transitioning of the Licensed Software to a Production Environment, County will monitor for Errors and Contractor shall maintain the Licensed Software and EHR System in Productive Use for a minimum of ninety (90) days. Upon occurrence of an Error, Contractor shall provide County with a diagnosis of the Error and proposed solution(s), and Contractor shall correct such Error by re-performance pursuant to, and subject to, the provisions of this Agreement. County and Contractor shall agree upon each such proposed solutions to be used to correct an Error(s) prior to its implementation.

Commencing with Final Acceptance and continuing through the Warranty Period, any problems encountered by County in the use of the Licensed Software and EHR System shall be subject to the applicable Support Services terms under the Agreement.

12.5.2 PERFORMANCE VERIFICATION REPORT

Contractor shall provide to County the performance verification report, including supporting Documentation that the Licensed Software and EHR System comply with the Specifications under full production load. Contractor shall conduct a review with County at a meeting scheduled by County after Productive Use of each Cluster and provide any County-requested demonstrations of the Licensed Software and EHR System including:

(a) Summary of activities, results, and outcomes;

(b) Summary of each Error identified by Contractor or County. The summary shall include for each Error:

(i) Description of each Error and its root cause,
(ii) Business processes, Licensed Software, Third-Party Products, and/or Hosting Software functions, and/or Interfaces impacted,

(iii) Description of all potential risks to the Licensed Software, Third-Party Products, and/or Hosting Software and mitigation strategy for the Licensed Software,

(iv) Corrective action plan, test scenarios, and implementation approach,

(v) Schedule for completion of each corrective action and resources required or assigned,

(vi) Status of each corrective action,

(vii) Date of completion of each correction, and

(viii) Date of the County Project Director's Approval of each correction;

(c) Summary of lessons learned; and

(d) Recommendations for any improvements to the Licensed Software, Third-Party Products, and/or Hosting Software.

12.5.3 FINAL ACCEPTANCE

The Licensed Software and EHR System shall achieve "**Final Acceptance**" and shall be ready for Productive Use by County in the Production Environment when the County Project Director, or his/her designee, Approves in writing that all Errors discovered during the ninety (90) day period following the successful transitioning of the Licensed Software to the Production Environment have been corrected, even if such correction occurred beyond the ninety (90) day period. Contractor shall provide the Certification of Performance Verification and Final Acceptance, certifying that the Licensed Software and the EHR System complies with the Specifications and documenting the review with County under Section 12.5.2 (Performance Verification Report), including agenda, attendees, action items, and supporting documentation.

12.6 FAILED TESTING

(a) If the County Project Director makes a good faith determination at any time that the Licensed Software or the EHR System (as a whole, or any component thereof), Services, Deliverables, and/or Milestones has not successfully completed an Acceptance Test or has not achieved Final Acceptance (collectively referred to for purposes of this Section 12.6 (Failed Testing) as "**Designated Test**"), the County Project Director shall promptly notify Contractor in writing of such failure, specifying with as much detail as possible the manner in which the Licensed Software, Services, Deliverables, Milestones, and/or EHR System failed to pass the applicable Designated Test. Contractor shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs, and modifications to the Licensed Software, Services, Deliverables, Milestones, and/or EHR System as will permit the Licensed Software, Services, Deliverables, Milestones, and/or EHR System to be ready for retesting. Contractor shall notify the County Project Director in writing when such corrections, repairs, and modifications have been completed, and the applicable Designated Test shall begin again. If, after the applicable Designated Test has been completed for a second time, the County Project Director makes a good faith determination that the Licensed

Software, Services, Deliverables, Milestones, and/or EHR System again fails to pass the applicable Designated Test, the County Project Director shall promptly notify Contractor in writing, specifying with as much detail as possible the manner in which the Licensed Software, Services, Deliverables, Milestones, and/or EHR System failed to pass the applicable Designated Test. Contractor shall immediately commence all reasonable efforts to complete, as quickly as possible, such necessary corrections, repairs, and modifications to the Licensed Software, Services, Deliverables, Milestones, and/or EHR System as will permit the Licensed Software, Services, Deliverables, Milestones, and/or EHR System to be ready for retesting.

(b) Such procedure shall continue, subject to County's rights under Sections 14.3.2 (Credits to County) and 14.3.3 (Termination for Failure to Complete Key Deliverable) in the event Contractor fails to timely complete any Key Deliverable, until such time as County notifies Contractor in writing either: (i) of the successful completion of such Designated Test or (ii) that County has concluded, subject to the Dispute Resolution Procedure, that satisfactory progress toward such successful completion of such Designated Test is not being made, in which latter event, County shall have the right to make a determination, which shall be binding and conclusive on Contractor, that a non-curable default has occurred and to terminate this Agreement in accordance with Section 29.2 (Termination for Material Breach) on the basis of such non-curable default.

(c) Such a termination by County may be, subject to the Dispute Resolution Procedure, as determined by County in its sole judgment: (i) a termination with respect to one or more of the components of the Licensed Software, Third-Party Products, and/or Hosting Software; (ii) a termination of the Statement(s) of Work relating to the Licensed Software, Third-Party Products, Hosting Software, Service(s), Deliverables(s), and/or Milestone(s) that is (are) not performing or conforming as required herein; or (iii) if County believes the failure to pass the applicable Designated Test materially affects the functionality, performance, or desirability to County of the EHR System as a whole, the entire Agreement. In the event of a termination under this Section 12.6 (Failed Testing), County shall have the right to receive from Contractor, within ten (10) days of written notice of termination, reimbursement of all payments made to Contractor by County under this Agreement for the component(s), Licensed Software, Third-Party Products, Hosting Software, Service(s), Deliverables(s), Milestone(s), and/or EHR System as to which the termination applies, or, if the entire Agreement is terminated, all amounts paid by County to Contractor under this Agreement. If the termination applies only to one or more Licensed Software or EHR System component(s), at County's sole option, any reimbursement due to it may be credited against other sums due and payable by County to Contractor. The foregoing is without prejudice to any other rights that may accrue to County or Contractor under the terms of this Agreement or by law.

12.7 INTEGRATION/INTERFACING

If the Licensed Software, Third-Party Products, and/or Hosting Software are to be integrated/Interfaced with other software, equipment, and/or systems provided by Contractor or at the direction of Contractor, including any customized Enhancements and Work Product, the Licensed Software, Third-Party Products, and/or Hosting Software shall not be deemed Accepted by County until the Licensed Software, Third-Party Products, and/or Hosting Software

and such other systems have been successfully integrated/Interfaced and Accepted by County in accordance with the terms of this Section 12 (Acceptance). For example, if Contractor is to provide Licensed Software, Third-Party Products, and/or Hosting Software consisting of multiple Modules or that includes Enhancements, including Work Product, to the Licensed Software, Third-Party Products, and/or Hosting Software as part of the Services, County's Acceptance of the Licensed Software, Third-Party Products, Hosting Software, and any individual Module or Enhancement shall not be final until County Accepts all of the Licensed Software, Third-Party Products, and/or Hosting Software and Modules or Enhancements integrated/Interfaced together as a complete system, including the operation of the Licensed Software, Third-Party Products, and/or Hosting Software on all equipment required for its use in conformance with the terms of this Agreement.

13. CHANGES TO AGREEMENT

13.1 GENERAL

No representative of either County or Contractor, including those named in this Agreement, is authorized to make any changes in any of the terms, obligations, or conditions of this Agreement, except through the procedures set forth in this Section 13 (Changes to Agreement). County reserves the right to change any portion of the Services required under this Agreement and to change any other provisions of this Agreement. All such changes shall be accomplished only as provided in this Section 13 (Changes to Agreement).

13.2 CHANGE NOTICES

For any change which does not authorize Contractor to incur any additional costs or expenses or affect any term or condition of this Agreement, a written change notice ("**Change Notice**") may be prepared and executed by the DHS CIO or designee.

13.3 CHANGE ORDERS

For any change which authorizes Contractor to incur any additional costs or expenses using Pool Dollars, a written Change Order may be prepared and executed by the DHS CIO or designee. For any Optional Work requested by County, following agreement on the Services, a Change Order shall be prepared and executed by each of: (a) the County Project Director, and (b) Contractor's authorized representative(s). County DHS CIO or designee is specifically authorized to execute Change Orders for expenditure of Pool Dollars for acquisition of Optional Work under the Agreement. Any requests for the expenditure of Pool Dollars must be Approved in writing by the DHS CIO or designee.

13.4 AMENDMENTS

Except as otherwise provided in this Agreement, for any change requested by County which requires a change to the Contract Sum or affects any term or condition included in this Agreement, a negotiated written amendment ("**Amendment**") to this Agreement must be prepared and executed by each of the Board and Contractor's authorized representative. Notwithstanding the foregoing, DHS' Director is specifically authorized to execute an Amendment to this Agreement on behalf of County upon County's election to extend this

Agreement for a Renewal Term(s) or to include Optional Work based on the terms negotiated herein.

13.5 CHANGES TO THE PROJECT SCHEDULE

Changes to the Project Schedule shall be made upon mutual agreement, in writing, by the DHS CIO or designee and the Contractor Project Director by Change Notice or otherwise, provided that the DHS CIO's or designee and the Contractor Project Director's agreement to alter the Project Schedule shall not prejudice either Party's right to claim that such alterations constitute an Amendment to this Agreement that shall be governed by the terms of Section 13.4 (Amendments) above.

13.6 EXTENSIONS OF TIME

Notwithstanding any other provision of this Section 13 (Changes to Agreement), to the extent that extensions of time for Contractor performance do not impact either the scope of Services or cost of this Agreement, the DHS CIO or designee, in his/her sole discretion, may grant Contractor extensions of time in writing for the work listed in the applicable sequentially numbered Exhibit A.25 (Project Control Document), provided such extensions shall not exceed a total of six (6) months beyond Final Acceptance.

13.7 BOARD ORDERS

Notwithstanding any other provision of this Section 13 (Changes to Agreement) or Section 29.6 (Termination for Convenience), Director shall take all appropriate action to carry out any orders of the Board relating to this Agreement, which directly impact the Licensed Software, EHR System or any of its components, or the budget allocated to the Licensed Software, EHR System or any of its components, or the Agreement, and, for this purpose, Director is authorized to: (1) issue written notice(s) of partial or total termination of this Agreement pursuant to Section 29.6 (Termination for Convenience) without further action by the Board and/or (2) prepare and execute Amendment(s) to this Agreement, which shall reduce the Services and the Contract Sum without further action by the Board.

(a) Such notices of partial or total termination shall be authorized under the following conditions:

(i) Notices shall be in compliance with all applicable Federal, State and County laws, rules, regulations, ordinances, guidelines and directives.

(ii) Director shall obtain the Approval of County Counsel for any notice.

(iii) Director shall file a copy of all notices with the Executive Office of the Board and County's Chief Executive Office within thirty (30) days after execution of each notice.

(b) Such Amendments shall be authorized under the following conditions:

(i) Amendments shall be in compliance with all applicable Federal, State, and County laws, rules, regulations, ordinances, guidelines and directives.

(ii) The Board has appropriated sufficient funds for purposes of such Amendments and this Agreement.

(iii) Director shall obtain the Approval of County Counsel for any Amendment.

(iv) Director shall file a copy of all Amendments with the Executive Office of the Board and County's Chief Executive Office within fifteen (15) days after execution of each Amendment.

13.8 FACSIMILE

Except for the Parties' initial signatures to this Agreement, which must be provided in "original" form and not by facsimile or other electronic form, County and Contractor hereby agree to regard facsimile representations of original signatures of authorized officials of each Party, when appearing in appropriate places on the Change Notices and Change Orders prepared pursuant to this Section 13 (Changes to Agreement) and received via communications facilities, as legally sufficient evidence that such original signatures have been affixed to Change Notices and Change Orders to this Agreement, such that the Parties need not follow up facsimile transmissions of such documents by subsequent (non-facsimile) transmissions of "original" versions of such documents.

14. CONTRACT SUM

14.1 MAXIMUM CONTRACT SUM

The Contract Sum under this Agreement shall be the total monetary amount payable by County to Contractor for supplying all the tasks, subtasks, Deliverables, goods, and Services required or requested by County under and during the Term of this Agreement. If County does not Approve work in writing, no payment shall be due Contractor for those Services. The Contract Sum, including all applicable taxes, authorized by County hereunder shall not exceed Three Hundred Sixty-Six Million, Nine Hundred Ninety Thousand, Five Hundred Ninety-Four Dollars ($366,990,594) as further detailed in Exhibit C (Fees; Contractor Professional Services Rates), unless the Contract Sum is modified pursuant to a duly Approved Amendment to this Agreement by the Board and Contractor's authorized representative(s) pursuant to Section 13 (Changes to Agreement). The Contract Sum under this Agreement shall cover the authorized payments for all elements of the EHR System, including the Licensed Software, Third-Party Products, Hosting Software, Hardware, and Services including, Implementation Services, Hosting Services, Support Services, and any Optional Work. The Contract Sum shall not be adjusted for any costs or expenses whatsoever of Contractor.

Contractor shall maintain a system of record keeping that will allow Contractor to determine when it has incurred seventy-five percent (75%) of the Contract Sum, including the Pool Dollars expenditures, authorized for this Agreement. Upon occurrence of this event, Contractor shall provide written notification to the County Project Director in accordance with Section 32.3 (Notices).

14.2 LICENSED SOFTWARE, THIRD-PARTY PRODUCTS, AND HOSTING SOFTWARE FEES

The license fees for the Licensed Software, Third-Party Products, and Hosting Software are specified in Exhibit C (Fees; Contractor Professional Services Rates). Payment of the licensee fees for the Licensed Software, Third-Party Products, and Hosting Software shall be made in accordance with the payment schedule specified in Exhibit C (Fees; Contractor Professional Services Rates).

14.3 IMPLEMENTATION SERVICES

14.3.1 IMPLEMENTATION FEES

Contractor shall provide Implementation Services in accordance with Exhibit A (Statements of Work) and the Agreement in exchange for County's payment of the applicable Implementation Fees. The "**Implementation Fees**" shall include any and all fees and costs to be paid by County for the Implementation Services, including all Services as that term is defined and the subset of those Services described in Exhibit A (Statements of Work), and all travel and living expenses incurred in connection with providing the Implementation Services, as specified in Exhibit C (Fees; Contractor Professional Services Rates). The Implementation Fees shall be a Fixed Fee amount specified in such Exhibit C (Fees; Contractor Professional Services Rates).

Included within the Services subject to the Implementation Fees, Contractor shall meet all Key Milestones by the date(s) specified unless extended by County in writing prior to the Key Milestone date. Should Contractor anticipate that the Contractor resources assigned to provide the Services, or any segment of Services (e.g., data conversion, building the test environment, or another work segment as set forth in the Statements of Work), subject to the Implementation Fees, are not sufficient to timely complete the Services, Contractor shall supplement them with Contractor resources at no additional cost to County as needed to timely complete the Services, or any segment of Services, within the time set forth in the Statement of Work.

14.3.2 CREDITS TO COUNTY

Contractor agrees that delayed performance by Contractor may cause damages to County, which are uncertain and would be impracticable or extremely difficult to ascertain in advance. Contractor further agrees that, in conformity with California Civil Code Section 1671, Contractor shall be liable to County for liquidated damages in the form of credits, as specified below in this Section 14.3.2 (Credits to County), as a fair and reasonable estimate of such damages. Any amount of such damages is not and shall not be construed as penalties and, when assessed, will be deducted from County's payment that is due.

For each and every occasion upon which a Deliverable marked on the applicable Exhibit A.25 (Project Control Document) as "Key" (hereinafter "**Key Deliverable**") has not been completed by Contractor within thirty (30) days after the date

scheduled for completion thereof as set forth in such Exhibit A.25 (Project Control Document) (hereinafter for each Key Deliverable "**Credit Due Date**"), other than as a result of delays caused by acts or omissions of County, and unless otherwise Approved in writing by the County Project Manager or designee in his/her discretion, County shall be entitled to receive credit against any or all amounts due to Contractor under this Agreement or otherwise in the total amount of One Thousand Dollars ($1,000) for each day after the Credit Due Date that the Key Deliverable is not completed as a fair and reasonable estimate of the harm caused by the delay provided that the total aggregate credits pursuant to this Section 14.3.2 (Credits to County) shall not exceed the Contract Sum. All of the foregoing credits shall apply separately, and cumulatively, to each Key Deliverable in the Project Schedule. A determination whether County shall assess credits due to it pursuant to this Section 14.3.2 (Credits to County) shall be made by the County Project Manager in his/her reasonable discretion. Notwithstanding the foregoing, if any Key Deliverable is not completed by the Credit Due Date, resulting in any of the above credits, but such Key Deliverable is thereafter completed by the date of the Milestone to which such Key Deliverable pertains, and if all other Deliverables required for the completion of such Milestone are completed by the Milestone date, then from and after the date such Milestone is completed the foregoing credits shall be reversed and shall no longer be deemed to apply as to any such Key Deliverable.

A Key Deliverable shall be deemed completed for purposes of this Section 14.3.2 (Credits to County) and Section 14.3.3 (Termination for Failure to Complete Key Deliverable) on the earliest date that all of the tasks, subtasks, Deliverables, goods, and Services required for the completion of such Key Deliverable are completed and delivered to County, provided that all of such tasks, subtasks, Deliverables, goods, and Services required for the completion of such Key Deliverable are thereafter Approved in writing by County pursuant to Section 9.13 (Approval of Key Deliverables) without prior rejection by County or significant delay in County's Approval thereof, which delay is the result of Contractor's failure to deliver such tasks, subtasks, Deliverables, goods, and Services in accordance with the terms hereof. For purposes of this Section 14.3.2 (Credits to County) and Section 14.3.3 (Termination for Failure to Complete Key Deliverable), the determination of whether a Key Deliverable has been so completed and is so Approved, and of the date upon which such Key Deliverable was completed, shall be made by the County Project Director as soon as practicable after County is informed by Contractor that such Key Deliverable has been completed and is given all the necessary information, data, and documentation to verify such completion.

14.3.3 TERMINATION FOR FAILURE TO COMPLETE KEY DELIVERABLE

In addition to the foregoing provisions of Section 14.3.2 (Credits to County), if any Key Deliverable is not completed within thirty (30) days after the applicable Credit Due Date other than as a result of delays caused by Interfering Acts, and thereafter Approved in writing by County pursuant to Section 9.13 (Approval of Key Deliverables), and unless the County Project Director and the Contractor Project Director have otherwise agreed, in writing, prior to such date scheduled for

completion, then County may, upon notice to Contractor, terminate this Agreement for default in accordance with Section 29.2 (Termination for Material Breach) as determined in the sole discretion of County, subject to the cure provisions set forth in Section 29.2 (Termination for Material Breach).

14.4 SUPPORT SERVICES

Contractor shall, during the Support Term, provide to County Support Services in exchange for County's payment of the applicable Support Services Fees set forth in Exhibit C (Fees; Contractor Professional Services Rates).

Contractor shall invoice County for Support Services for the applicable Cluster on a monthly basis, and County will pay the applicable monthly fees to Contractor in arrears. The monthly Support Services Fees for the applicable Cluster shall be calculated as a portion of the Support Services Fees as specified in Exhibit C (Fees; Contractor Professional Services Rates).

The Support Services Fees shall be fixed during the Initial Support Term of this Agreement. Thereafter, Contractor is eligible for a Cost of Living Adjustment on an annual basis during the Support Renewal Term. The amount of any such increase shall be determined, and subject to the limits, as described in Section 14.10 (Cost of Living Adjustment).

14.5 OTHER SERVICES AND THIRD-PARTY PRODUCT FEES

The fees for the Hosting Services, Third-Party Products (including clinical content) are specified in Exhibit C (Fees; Contractor Professional Services Rates). Payment of such fees shall be made, first in accordance with the requirements of this Agreement, and then pursuant to the payment schedule in Exhibit C (Fees; Contractor Professional Services Rates).

14.6 HARDWARE

All Hardware costs and fees are set forth in Exhibit C (Fees; Contractor Professional Services Rates).

14.7 IMPLEMENTING OPTIONAL WORK

14.7.1 NEW SOFTWARE

During the Support Term, if New Software is subsequently made Generally Available to any of Contractor's other clients, County shall have the option to obtain such New Software or products at a price equal to the Contractor's then current list pricing reduced by a rate or discount percentage as set forth in Exhibit C (Fees; Contractor Professional Services Rates).

14.7.2 PROFESSIONAL SERVICES

Upon County's request for Professional Services, Contractor shall provide to County, within fifteen (15) Business Days of County's request therefor, a written quotation providing a pricing proposal consistent with the payment method required by County based on the Fixed Hourly Rate, as applicable. Contractor's quotation shall

be valid for at least ninety (90) days from submission. Contractor's rates for Professional Services shall be subject to the applicable pricing terms set forth in Exhibit C (Fees; Contractor Professional Services Rates) during the Term of this Agreement. Contractor's Fixed Hourly Rate for Professional Services, as of the Effective Date, specified in Exhibit C (Fees; Contractor Professional Services Rates), shall be fixed for thirty-six (36) months after the Effective Date. Thereafter, Contractor may increase such rates by providing notice to County at least ninety (90) days prior to the commencement of a new Contract Year during the Support Term of this Agreement. The amount of any such increase shall be determined, and subject to the limits, as described below in Section 14.10 (Cost of Living Adjustment).

(a) Fixed Fee or Not to Exceed. In the event that the Parties agree that Contractor shall perform the Professional Services on either a fixed fee or not to exceed basis, the applicable Statement of Work shall include an estimated percentage allocation of the fixed fee or not to exceed amount for each Milestone. Contractor shall not perform Professional Services in excess of the fee amount allocated to a Milestone in the Statement of Work without first obtaining prior County written Approval to exceed the fee amount allocated to the Milestone in the Statement of Work. If Contractor provides Professional Services in excess of the fee amount allocated to a Milestone in the Statement of Work without first obtaining prior County written Approval, such Professional Services shall be deemed to be a gratuitous effort on the part of Contractor, and Contractor shall have no claim whatsoever against County therefor (it being understood by the Parties that Contractor shall have no obligation to continue to provide such gratuitous Professional Services unless Approved by County in writing in which case County shall compensate Contractor in accordance with this Agreement).

(b) Time and Materials. In the event that the Parties agree that Contractor shall perform the Professional Services on a time and materials basis, the applicable Statement of Work shall include a fee estimate. In the event it is anticipated that the fee estimate provided in such Statement of Work ("**Contractor Professional Services Fee Projection**") will be exceeded, Contractor will provide written notice to County in advance of incurring such excess cost. In the event Contractor does provide County with advance notice of a Project Overrun and County elects to proceed, any amounts incurred in excess of the Contractor Professional Services Fee Projection will be considered a "**Project Overrun**." In the event Contractor does not provide County with advance notice of a Project Overrun, Contractor shall be solely responsible for the Project Overrun. Project Overruns shall be accounted for upon the earlier of the completion of the applicable Statement of Work or the expiration or termination of this Agreement. Prior to such accounting, Contractor and County agree to assume that both Parties are equally at fault and will share equally of the Project Overrun. If, as part of the Dispute Resolution Procedure, either

Party is determined to be the primary cause of a Project Overrun, costs will be shared as follows:

(i) If Contractor, or any party other than County which Contractor has subcontracted to perform services or tasks, is determined to be the primary cause of the Project Overrun, Contractor shall be responsible for seventy-five percent (75%) of the Project Overrun. To the extent County has paid fees to Contractor as to such Project Overrun under the equal sharing provision above, such amounts paid in excess of the Project Overrun share allocated under this subpart shall be refunded to County by Contractor.

(ii) If County, or any party other than Contractor which County has contracted to perform services or tasks, is determined to be the primary cause of the Project Overrun, County shall be responsible for seventy-five percent (75%) of the Project Overrun. To the extent Contractor has paid or credited fees to County as to such Project Overrun under the equal sharing provision above, such amounts paid or credited in excess of the Project Overrun share allocated under this subpart shall be refunded to Contractor by County.

The determination of "**primary cause**" shall be made in accordance with Section 27 (Dispute Resolution Procedure) and, notwithstanding anything to the contrary in Section 27 (Dispute Resolution Procedure), shall be binding, final, and not subject to appeal.

14.8 NON-APPROPRIATION OF FUNDS

County's obligation may be limited if it is payable only and solely from funds appropriated for the purpose of this Agreement. Notwithstanding any other provision of this Agreement, County shall not be obligated for Contractor's performance hereunder or by any provision of this Agreement during any of County's future fiscal years unless and until the Board appropriates funds for this Agreement in County's budget for each such future fiscal year. In the event that funds are not appropriated for this Agreement, then County shall, at its sole discretion, either (a) terminate this Agreement as of June 30 of the last fiscal year for which funds were appropriated or (b) reduce the work provided hereunder in accordance with the funds appropriated. In the event of such a termination, Contractor shall be entitled to seek payment for Deliverables completed by Contractor and Approved by County in accordance with this Agreement prior to the effective date of such termination. County will notify Contractor in writing of any such non-appropriation of funds at its election at the earliest possible date.

14.9 COUNTY'S OBLIGATION FOR FUTURE FISCAL YEARS

In the event that the Board adopts, in any fiscal year, a County budget which provides for the reductions in the salaries and benefits paid to the majority of County employees and imposes similar reductions with respect to County contracts, County reserves the right to reduce its payment obligation under this Agreement correspondingly for that fiscal year and any subsequent fiscal year during the Term of this Agreement (including any extensions), and the

products and services to be provided by Contractor under this Agreement shall also be reduced correspondingly. County's notice to the Contractor regarding said reduction in payment obligations shall be provided within thirty (30) calendar days of the Board's Approval of such actions. Except as set forth in this Section 14.9 (County's Obligation for Future Fiscal Years), Contractor shall continue to perform as provided in this Agreement.

14.10 COST OF LIVING ADJUSTMENT

Any Cost of Living Adjustment under this Agreement will be limited to the Support Services and the Fixed Hourly Rate for Professional Services provided during the Renewal Support Term. The Parties will assess whether Contractor is eligible for a Cost of Living Adjustment as provided under this Section on an annual basis during the Renewal Support Term provided the maximum amount of a Cost of Living Adjustment in any Contract Year shall be capped at the lesser of: (a) the difference between the most recently published percentage change, if any, in the U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index - Urban Wage Earners and Clerical Workers ("**CPI-W**") for the Los Angeles – Riverside – Orange County Area for the Contract Year prior to the year for which the COLA is being calculated and the CPI-W for the Contract Year of the first Use Reconciliation under Exhibit C (Fees; Contractor Professional Services Rates) (the "**Base Year Index**"), or (b) three percent (3%) (hereafter, "**Cost of Living Adjustment**" or "**COLA**"). In no event shall the cumulative Cost of Living Adjustment increases over the Renewal Support Term exceed five percent (5%) of the Support Services Fee or Fixed Hourly Rate for Professional Services as of the Effective Date and as set forth in Exhibit C (Fees; Contractor Professional Services Rates).

14.11 ALL FEES STATED

Except as provided in this Section 14 (Contract Sum) or in the event of an Amendment to this Agreement, there are no other fees or charges to be paid by County in connection with this Agreement for the Licensed Software, Third-Party Products, Hosting Software, Hardware, and Services, including without limitation Implementation Services, Hosting Services, Support Services and/or other Services or Deliverables provided by Contractor to County under this Agreement. Any work performed by Contractor and not specifically authorized by County in writing shall be considered gratuitous and Contractor shall have no right or claim whatsoever to any form of compensation.

15. INVOICES AND PAYMENTS

15.1 INVOICES

Contractor shall invoice County in accordance with Exhibit C (Fees; Contractor Professional Services Rates) (1) for Implementation Services, based on the Deliverable amounts due, as set forth in Exhibit A.25 (Project Control Document) upon Contractor's completion and County's written Approval of billable Deliverables; (2) for Support Services, by payment of monthly fees monthly in arrears commencing sixty (60) days after Productive Use of each Cluster; and (3) for all Optional Work, on a per Change Order basis by payment of the actual price expended by Contractor for the provision of Optional Work, not to exceed the Maximum Fixed Price quoted for such Optional Work following Contractor's completion and County's written Approval thereof. Contractor shall invoice for Hosting Services and Third-Party Products (including clinical

content) in accordance first to the requirements of this Agreement, and then pursuant to the payment schedule in Exhibit C (Fees; Contractor Professional Services Rates).

15.1.1 SUBMISSION OF INVOICES

Contractor's invoice shall include the charges owed to Contractor by County under the terms of this Agreement as provided in Exhibit C (Fees; Contractor Professional Services Rates). All invoices and supporting documents under this Agreement shall be submitted to the DHS CIO or designee in accordance with Section 32.3(a) (Notices), with copies to DHS Finance.

15.1.2 INVOICE DETAILS

Each invoice submitted by Contractor shall indicate, at a minimum:

(a) Agreement name and number;

(b) The tasks, subtasks, Deliverables, goods, services, or other Services for which payment is claimed, including Implementation Services Deliverables, Support Services, and Optional Work;

(c) The price of such tasks, subtasks, Deliverables, goods, services, or other Services calculated based on the pricing terms set forth in Exhibit C (Fees; Contractor Professional Services Rates) or any Change Order, as applicable;

(d) The date of written Approval of the tasks, subtasks, Deliverables, goods, services, or other Services by the County Project Director;

(e) Indication of any applicable withhold or Holdback Amounts for payments claimed or reversals thereof;

(f) Indication of any applicable credits due County under the terms of this Agreement or reversals thereof;

(g) A copy of all applicable Acceptance Certificates signed by the County Project Director and the County Project Manager; and

(h) Any other information reasonably required by the County Project Director.

15.1.3 APPROVAL OF INVOICES

All invoices submitted by Contractor to County for payment shall have County's written Approval as provided in this Section 15.1 (Invoices), which approval shall not be unreasonably withheld. In no event shall County be liable or responsible for any payment prior to such written Approval.

15.1.4 INVOICE DISCREPANCIES

The DHS CIO or designee will review each invoice for any discrepancies and will, within forty-five (45) days of receipt thereof, notify Contractor in writing of any discrepancies found upon such review and submit a list of disputed charges. Contractor shall review the disputed charges and send a written explanation detailing the basis for the charges within forty-five (45) days of receipt of County's notice of discrepancies and disputed charges. If the DHS CIO or designee does not receive a written explanation for the charges within such forty-five (45) day period, Contractor shall be deemed to have waived its right to justify the original invoice amount, and County shall pay the undisputed amount as provided in Section 15.4 (Payments) and shall not be obligated to pay the disputed amount applicable to that invoice period.

All correspondence to County relating to invoice discrepancies shall be sent by email, followed by hard copy, directly to DHS Finance with a copy to the DHS CIO or designee in accordance with Section 32.3 (Notices). All correspondence to Contractor relating to invoice discrepancies shall be sent by email, followed by hard copy, directly to Contractor's Client Financial Specialist with a copy to the Contractor Client Results Executive ("**CRE**") or designee in accordance with Section 32.3 (Notices).

15.2 DELIVERY OF LICENSED SOFTWARE

All Licensed Software, Third-Party Products, Hosting Software and Documentation provided by Contractor under this Agreement, including the product of Support Services and any Optional Work, shall be delivered (i) solely in electronic format (e.g., via electronic mail or internet download), or (ii) personally by Contractor Personnel who shall load the Licensed Software, Third-Party Products and Documentation onto County's hardware but who will retain possession of all originals and copies of such tangible media (e.g., CD-ROM, magnetic tape, printed manuals) used to deliver the Licensed Software and Documentation to County.

Any Licensed Software, Third-Party Products, Hosting Software and Documentation provided or delivered by Contractor to County in a tangible format for Contractor Personnel to load and leave with the Licensed Software and Documentation shall be F.O.B. Destination. The Contract Sum shown in Section 14.1 (Maximum Contract Sum) includes all amounts necessary for County to reimburse Contractor for all transportation and related insurance charges, if any, on Licensed Software, Third-Party Products, Hosting Software and Documentation procured by County from Contractor pursuant to this Agreement. All transportation and related insurance charges, if any, shall be paid directly by Contractor to the applicable carrier.

In the event Licensed Software, Third-Party Products, Hosting Software or Documentation is provided or delivered by Contractor to County in a tangible format, Contractor shall bear the full risk of loss due to total or partial destruction of the Licensed Software, Third-Party Products, Hosting Software and/or Documentation loaded on CDs or other computer media until such items are delivered to and Accepted in writing by County.

15.3 SALES/USE TAX

The Contract Sum shown in Section 14.1 (Maximum Contract Sum) shall be deemed to include all amounts necessary for County to reimburse Contractor for all applicable California and other state and local sales/use taxes on all Licensed Software, Third-Party Products, Hosting Software provided by Contractor to County pursuant to or otherwise due as a result of this Agreement, including, but not limited to, the product of Support Services and any Optional Work, to the extent applicable. All California sales/use taxes shall be paid directly by Contractor to the State or other taxing authority.

Contractor shall be solely liable and responsible for, and shall indemnify, defend, and hold harmless County from, any and all such California and other state and local sales/use taxes. Further, Contractor shall be solely liable and responsible for, and shall indemnify, defend, and hold harmless County from, all applicable California and other state and local sales/use tax on all other items provided by Contractor pursuant to this Agreement and shall pay such tax directly to the State or other taxing authority. In addition, Contractor shall be solely responsible for all taxes based on Contractor's income or gross revenue, or personal property taxes levied or assessed on Contractor's personal property to which County does not hold title.

15.4 PAYMENTS

County will pay all undisputed invoice amounts to Contractor within forty-five (45) days of receipt of invoices that have not been disputed in accordance with Section 15.1.4 (Invoice Discrepancies) above. County's failure to pay within the forty-five (45) day period, however, shall not be deemed as automatic invoice Approval or Acceptance by County of any Deliverable for which payment is sought, nor shall it entitle Contractor to impose an interest on any late payment.

15.5 NO PAYMENT FOR SERVICES PROVIDED FOLLOWING EXPIRATION/TERMINATION OF AGREEMENT

Contractor shall have no claim against County for payment of any money or reimbursement, of any kind whatsoever, for any service provided by the Contractor after the expiration or other termination of this Agreement. Should the Contractor receive any such payment it shall immediately notify County and shall immediately repay all such funds to County. Payment by County for services rendered after expiration/termination of this Agreement shall not constitute a waiver of County's right to recover such payment from the Contractor. This provision shall survive the expiration or other termination of this Agreement.

15.6 HOLDBACKS

(a) The Implementation Fees shall be allocated among the Key Milestones as set forth in the Statements of Work ("**Key Milestone Allocation**"). The amount allocated to each Key Milestone need not be the same, provided, however, all allocated amounts must aggregate to equal the Implementation Fees. The Key Milestone Allocation will be divided by the number of months set forth in the original Statement of Work for completion of the Key Milestone ("**Key Milestone Scheduled Duration**") and that amount shall be multiplied by ninety percent (90%) to determine the "**Monthly Key**

Milestone Payment." The Monthly Key Milestone Payment will be made by County only for the Key Milestone Scheduled Duration. The remaining ten percent (10%) of the amounts invoiced ("**Holdback Amount**") will be payable as set forth in this Section 15.6 (Holdbacks). All amounts invoiced by Contractor under the Statements of Work shall be subject to the Holdback Amount. The Holdback Amount will be payable to Contractor based upon County's Approval of the applicable Key Milestone.

(b) A Key Milestone shall be deemed Approved for purposes of this Section 15.6 (Holdbacks) on the earliest date that all of the tasks, subtasks, Deliverables, goods, Services and other work required for completion of the Key Milestone are completed, tested for acceptability, and Approved in writing by County. The determination of whether each Key Milestone has been so completed and so Approved shall be made by the County Project Director as soon as practicable after County is informed by Contractor that such Key Milestone has been completed and is given all the necessary information, data, and documentation to verify such completion. If a Key Milestone is not Approved due to its failure to meet the applicable Acceptance Criteria or tests within thirty (30) calendar days of its scheduled completion per the Statement of Work, the Holdback Amount will not be paid until Approval of the next Key Milestone. No accumulated Holdback Amounts will be paid as to any Key Milestone, until all preceding Key Milestones have been Approved.

15.7 RESPONSIBILITY FOR COSTS

Except for any reimbursable expenses specified in a Statement of Work, or as otherwise Approved in writing by County, Contractor shall be responsible for all costs and expenses incidental to the provision of the Licensed Software and performance of Services, including but not limited to, all costs for Third-Party Products and equipment provided by Contractor, and all fees, fines, licenses, bonds or taxes required of or imposed against Contractor including but not limited to corporate income tax, sales and excise taxes or amounts levied thereof, and all other of Contractor's costs of doing business. Contractor shall supply copies of third-parties' invoices and other reasonable supporting documentation in substantiation of any reimbursable expenses, as County may request from time to time. No payments will be made for services rendered or expenses incurred by Contractor other than the Services or Deliverables unless such services are Approved in advance in writing by County, and Contractor supplies such documentation as County may request with respect to such costs.

15.8 TRAVEL AND LIVING EXPENSES

If reimbursement of travel expenses for Professional Services as provided in Section 14.7.2 (Professional Services), including airfare, parking, mileage, rental cars, taxi, fuel, tolls, lodging, and per diem, if applicable, are authorized by County in connection with a separate Statement of Work, such expenses shall be subject to, and shall not exceed, the expenditure limits set forth for County personnel in the then current Chapter 5.40 (Travel and Other Expenses) of the Los Angeles County Code, and as updated from time to time by the Los Angeles County Auditor-Controller. Contractor will provide all invoices, receipts, and other documentation reasonably needed to support the request for reimbursement.

For the avoidance of doubt, all travel and living expenses for the Services described in the Statements of Work are included in the Contract Sum.

15.9 PAYMENT DOES NOT IMPLY ACCEPTANCE

The making of any payment or payments by County, or the receipt thereof by Contractor, shall not imply Acceptance by County of such items or the waiver of any warranties or requirements of this Agreement.

15.10 RECORD RETENTION AND INSPECTION/AUDIT SETTLEMENT

Contractor shall maintain accurate and complete financial records of its activities and operations relating to this Agreement in accordance with generally accepted accounting principles. Contractor shall also maintain accurate and complete employment and other records relating to its performance of this Agreement. Contractor agrees that the County, any Federal or State auditor, or their authorized representatives, shall have access to and the right to examine, audit, excerpt, copy, or transcribe any pertinent transaction, activity, or record relating to this Agreement. For the avoidance of doubt, such audits include but are not limited to audits under the Health Care Coverage Initiative and the HITECH Act. All such material, including, but not limited to, all financial records, bank statements, cancelled checks or other proof of payment, timecards, sign-in/sign-out sheets and other time and employment records, and proprietary data and information, shall be kept and maintained by the Contractor and shall be made available to the County during the Term of this Agreement and for a period of five (5) years thereafter unless the County's written permission is given to dispose of any such material prior to such time and provided such access rights do not constitute an unlawful invasion of the privacy rights of any Contractor employee. Notwithstanding the foregoing, with respect to employment records that are not needed to support any financial or billing records, such records shall be kept and maintained by Contractor in accordance with Contractor's written records retention policy. All such material shall be maintained by the Contractor at a location in Los Angeles County, provided that if any such material is located outside Los Angeles County, then, at the County's option, the Contractor shall pay the County for travel, per diem, and other costs incurred by the County to examine, audit, excerpt, copy, or transcribe such material at such other location.

(a) In the event that an audit of the Contractor is conducted specifically regarding this Agreement by any Federal or State auditor, or by any auditor or accountant employed by the Contractor or otherwise, then the Contractor shall file a copy of such audit report with the County's Auditor-Controller within thirty (30) days of the Contractor's receipt thereof, unless otherwise provided by applicable Federal or State law or under this Agreement. Subject to applicable law, the County shall make a reasonable effort to maintain the confidentiality of such audit report(s).

(b) Failure on the part of the Contractor to comply with any of the provisions of this Section 15.10 (Record Retention and Inspection/Audit Settlement) shall constitute a material breach of this Agreement upon which the County may terminate or suspend this Agreement.

(c) If, at any time during the Term of this Agreement or within five (5) years after the expiration or termination of this Agreement, representatives of the County conduct an audit of the Contractor regarding the work performed under this Agreement, and if such audit finds that the County's dollar liability for any such work is less than payments made by the County to the Contractor, then the difference shall be either: (i) repaid by the Contractor to the County by cash payment upon demand or (ii) at the sole option of the County's Auditor-Controller, deducted from any amounts due to the Contractor from the County, whether under this Agreement or otherwise. If such audit finds that the County's dollar liability for such work is more than the payments made by the County to the Contractor, then the difference shall be paid to the Contractor by the County, provided that in no event shall the County's maximum obligation for this Agreement exceed the funds appropriated by the County for the purpose of this Agreement.

15.11 CONTRACTOR SELF-AUDIT

Contractor will provide to County a summary of: (1) the results of any security audits, security reviews, or other relevant audits listed below, conducted by Contractor or a third-party; and (2) the corrective actions or modifications, if any, Contractor will implement in response to such audits.

Relevant audits conducted by Contractor as of the Effective Date include:

(a) ISO 9001:2008 (Quality Systems) or FDA's Quality System Regulation, etc. – Contractor-Wide. A full recertification is conducted every three (3) years with surveillance audits annually.

(i) **External Audit –** Audit conducted by non-Contractor personnel, to assess Contractor's level of compliance to applicable regulations, standards, and contractual requirements.

(ii) **Internal Audit –** Audit conducted by qualified Contractor Personnel (or contracted designee) not responsible for the area of review, of Contractor organizations, operations, processes, and procedures, to assess compliance to and effectiveness of Contractor's Quality System ("**CQS**") in support of applicable regulations, standards, and requirements.

(iii) **Supplier Audit –** Quality audit conducted by qualified Contractor Personnel (or contracted designee) of product and service suppliers contracted by Contractor for internal or Contractor client use.

(iv) Detailed findings are not published externally, but a summary of the report findings, and corrective actions, if any, will be made available to County as provided above and the ISO certificate is published on Cerner.com.

(b) SSAE-16 (formerly known as SAS -70 II) – As to the Hosting Services only:

(i) Audit spans a full twelve (12) months of operation and is produced every six (6) months (end of June, end of December) to keep it "fresh."

(ii) The resulting detailed report is available to County.

(c) PCI ("**Payment Card Industry**") – Contractor hosted solutions/systems that have a credit card processing component.

(i) Network scans are completed quarterly in accordance payment card industry requirements.

Detailed findings are not published externally, but a summary of the report findings, and corrective actions, if any, will be made available to County as provided above.

15.12 SECURITY AUDITS

In addition to the audits described in Section 15.11 (Contractor Self Audit), during the Term of this Agreement, County or its third-party designee may annually, or more frequently as agreed in writing by the Parties, request a security audit of Contractor's data center and systems. The audit will take place at a time mutually agreed to by the Parties, but in no event on a date more than ninety (90) days from the date of the request by County. County's request for security audit will specify the areas that are subject to the audit and may include physical inspection, process reviews, evidence of external and internal vulnerability scans performed by Contractor (e.g., summary data of the results of the scan that has been filtered to remove the specific information of other Contractor customers such as IP address, server names, etc.), evidence of code reviews, and evidence of system configuration reviews. County shall pay for all third-party costs associated with the audit. Contractor shall cooperate with County in the development of the scope and methodology for the audit, and the timing and implementation of the audit. Any of County's regulators shall have the same right upon request, to request an audit as described above. Contractor agrees to comply with all reasonable recommendations that result from such inspections, tests, and audits within reasonable timeframes.

15.13 VERIFICATION OF LICENSEE COSTS BY GOVERNMENT

Until the expiration of four (4) years after the furnishing of any service pursuant to this Agreement, Contractor shall make available, upon written request of the Secretary of Health and Human Services or the Comptroller General of the United States or any of their duly authorized representatives, copies of this Agreement and any books, documents, records, and other data of Contractor that are necessary to certify the nature and extent of costs incurred by County for such services. If Contractor carries out any of its duties under this Agreement through a subcontract with a related organization involving a value or cost of Ten Thousand Dollars ($10,000) or more over a twelve (12) month period, Contractor shall cause such subcontract to contain a clause to the effect that, until the expiration of four (4) years after the furnishing of any service pursuant to said contract, the applicable organization will make available, upon written request of the Secretary of Health and Human Services or the Comptroller General of the United States or any of their duly authorized representatives, copies of records of the related organization that are necessary to certify the nature and extent of costs incurred for such services. Contractor shall ensure that this provision also apply to any contract

between a subcontractor and an organization related to the subcontractor by control or common ownership.

16. INDEPENDENT CONTRACTOR

16.1 INDEPENDENT CONTRACTORS

This Agreement is by and between the County and the Contractor and is not intended, and shall not be construed, to create the relationship of agent, servant, employee, partnership, joint venture, or association, as between the County and the Contractor. The employees and agents of one Party shall not be, or be construed to be, the employees or agents of the other Party for any purpose whatsoever. Contractor is an independent contractor and has no authority to bind, County by contract or otherwise. Contractor will perform the Services under the general direction of County, but Contractor will determine, in Contractor's sole discretion, the manner and means by which the Services are accomplished, subject to the requirement that Contractor will at all times comply with applicable law and with County's reasonable instructions. Further, it is not the intention of this Agreement or of the Parties to confer a third-party beneficiary right of action upon any third-party or entity whatsoever, and nothing in this Agreement will be construed so as to confer upon any third-party or entity other than the Parties hereto a right of action under this Agreement or in any manner whatsoever.

16.2 EMPLOYMENT RELATED CLAIMS

Contractor agrees to be solely responsible for all matters relating to compensation of its employees, subcontractors, agents, partners, or consultants including but not limited to compliance with laws governing workers' compensation, Social Security, provident fund, retrenchment, lay-off or termination compensation, withholding and payment of any and all federal, state, and local personal income taxes, disability/death insurance, unemployment, and any other taxes for such persons, including any related employer assessment or contributions required by law, and all other regulations governing such matters, and the payment of all salary, vacation, and other employee benefits. At Contractor's expense as described herein, Contractor agrees to defend, indemnify, and hold harmless County, and its officers, agents, employees, members, subsidiaries, joint venture partners, Affiliated Users, and successors in interest from and against any claim, demand, action, proceeding (threatened or actual), judgment, liability, loss, damage, cost, or expense, including, without limitation, reasonable attorneys' fees as provided herein arising out of Contractor's or County's alleged failure to pay, when due, all Contractor's tax and payment obligations under this Section 16.2 (Employment Related Claims) (collectively referred to for purposes of this Section as "**Employment Claim(s)**"). Contractor shall pay to County any expenses or charges relating to or arising from any such Employment Claim(s) as they are incurred by County.

16.3 NO ELIGIBILITY FOR BENEFITS

Neither Contractor nor its employees or agents shall be eligible to enroll for and/or receive benefits under any County employee benefit plan maintained by County, including, without limitation, any employee pension benefit plan within the meaning of Section 3(2) of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), any employee

welfare benefit plan within the meaning of Section 3(1) of ERISA, or any stock option or stock purchase plan.

16.4 COMMON-LAW EMPLOYEES

The foregoing shall apply to Contractor and Contractor's employees and agents even if Contractor or any Contractor employee or agent is subsequently reclassified by any court or governmental agency as a common-law employee for periods during which services were performed under this Agreement.

17. REPRESENTATIONS AND WARRANTIES

17.1 CONTRACTOR'S WARRANTIES

Contractor represents and warrants that:

17.1.1 AUTHORITY

Contractor has the full power, capacity, and authority to enter into and perform this Agreement and to make the grant of rights contained herein, and Contractor's performance of this Agreement does not violate or conflict with any agreement to which Contractor is a party. Further, Contractor represents and warrants that the person executing this Agreement for the Contractor is an authorized agent who has actual authority to bind the Contractor to each and every term, condition, and obligation of this Agreement and that all requirements of the Contractor have been fulfilled to provide such actual authority;

17.1.2 PERFORMANCE OF SERVICES

The Services will be performed and the Deliverables developed in a professional, competent, and timely manner by appropriately qualified Contractor Personnel in accordance with this Agreement and consistent with Contractor's applicable Best Practices;

17.1.3 CONFORMANCE TO SPECIFICATIONS

All the Licensed Software, Hosting Software, Third-Party Products, Hardware, Services, including Implementation Services, Hosting Services, Support Services, and Deliverables shall conform to the Specifications and requirements set forth in this Agreement without material deviations for the period commencing upon the Effective Date and continuing through the expiration or termination of Support Services ("**Warranty Period**"). Except as provided Section 9.7.2(b) (No Material Adverse Effects), this warranty is conditioned on the County operating the current Version of Licensed Software and Third-Party Products or one of the two (2) prior Versions as it relates to the current Version. Contractor shall institute quality controls, including suitable testing procedures, if any, to ensure that the Licensed Software, Hardware, Services, including Implementation Services, Hosting Services, Support Services, and Deliverables comply with the terms of this Agreement. Upon

County's reasonable request, County shall have the right to review Contractor's quality controls utilized to verify and/or improve the quality of the Licensed Software, Hosting Software, Services and Deliverables. A sample of Contractor's quality controls is attached as Exhibit I (Contractor Quality Controls);

17.1.4 NON-INFRINGEMENT

The Licensed Software (excluding the Integral Third-Party Software), Services, and the Deliverables do not contain defamatory or indecent matter, and County's permitted use of the Licensed Software (excluding the Integral Third-Party Software), Services, including Implementation Services, Hosting Services, Support Services, and the Deliverables do not and will not infringe U.S. patents, trademarks, copyrights and other intellectual property rights of any third-party. To the best of Contractor's knowledge as of the Effective Date, the Hosting Software, Third-Party Products, and Integral Third-Party Software do not contain defamatory or indecent matter, and County's permitted use of the Hosting Software, Third-Party Products, and Integral Third-Party Software do not infringe U.S. patents, trademarks, copyrights and other intellectual property rights of any third-party;

17.1.5 NO PENDING OR THREATENED LITIGATION

There is no pending or threatened litigation that would have a material adverse impact on its performance under the Agreement. In addition, Contractor also represents and warrants that based on pending actions, claims, disputes, or other information Contractor's Executive Cabinet as listed in Contractor's Annual Report or Chief Legal Officer has no knowledge of a failure of the Licensed Software, Hosting Software, or Third-Party Products to perform in accordance with the Specifications that would impact patient care, EHR System performance, create a financial hardship for customers, or affect confidentiality, and of which Contractor has not previously notified the County;

17.1.6 DOCUMENTATION; MATERIAL DIMINUTION IN FEATURES

The Documentation shall be complete and accurate so as to enable a reasonably skilled County user to effectively use all of its features and functions without assistance from Contractor and, on each date on which Contractor delivers it to County, the Documentation is Contractor's most current version thereof. The Documentation shall not be changed in a manner that results in a material diminution of a feature or function of the Licensed Software, without the prior written Approval of County, unless the Documentation is changed in connection with a Revision to the Licensed Software as set forth in Section 9.7.2(a) (Substantial Equivalence);

17.1.7 ASSIGNMENT OF WARRANTIES

To the extent permissible under the applicable third-party agreements, Contractor hereby assigns and agrees to deliver to County all representations and warranties

received by Contractor from its third-party licensors and suppliers, including Hardware vendors;

17.1.8 DESTRUCTIVE/DISABLING MECHANISMS

The Licensed Software, Hosting Software, Third-Party Products (to Contractor's knowledge) and, Hardware (to Contractor's knowledge), do not contain, and Contractor shall not insert into the Licensed Software, Hosting Software, Third-Party Products or Hardware, any Destructive Mechanisms, as defined below. Contractor shall not invoke such mechanisms at any time, including upon expiration or termination of this Agreement for any reason. Except if and to the extent expressly necessary for performance of Support Services, or any other servicing or support expressly authorized in writing by County, in no event shall Contractor, Contractor Personnel or anyone acting on its behalf, disable or interfere, in whole or in part, with County's use of the Licensed Software, Hosting Software, Third-Party Products or any software, hardware, systems or data owned, utilized, or held by County without the written permission of a corporate officer of County, whether or not the disablement is in connection with any dispute between the Parties or otherwise. Contractor understands and acknowledges that a breach of this Section 17.1.8 (Destructive/Disabling Mechanism) could cause substantial harm to County and to numerous third-parties having business relationships with County;

17.1.9 SYSTEM CONFIGURATION WARRANTY

Contractor has had the opportunity to assess County's existing information systems, specifically its applications, interface engine, network infrastructure, and connectivity (hereinafter collectively referred to as the "**Existing System**") relating to installation, implementation, and use of the EHR System. Contractor has had the opportunity to inquire of County's staff regarding the operation of the Existing System and its components and to review relevant documentation regarding the Existing System. Based on its assessment and experience with customers similar to County using Hosted Services, Contractor has provided County a Recommended Configuration providing performance and capacity specifications for:

1. Network infrastructure; and

2. Connectivity

for the Existing System for use in connection with the EHR System.

Provided County operates its Existing System in substantial conformance with the Recommended Configuration, Contractor represents and warrants that the Existing System and the EHR System are sufficient in size, capacity, and processing capability for the use by the County of the EHR System in accordance with this Agreement through one (1) year after Productive Use at the final Cluster ("**Configuration Warranty Period**"). If, during the Configuration Warranty Period, additional network infrastructure or connectivity to support and operate the EHR System as required by this Agreement is needed, Contractor shall pay all fees and costs

associated with the acquisition and installation of the software, equipment, and services pertaining to the network infrastructure and/or connectivity required to support and operate the EHR System as required by this Agreement. For purposes of this Section 17.1.9 (System Configuration Warranty), "substantial conformance" shall mean that the root cause of the Existing System issue giving rise to this warranty is not attributable to County's failure to conform to the Recommended Configuration.

17.1.10 RESOURCE REQUIREMENT WARRANTY

Contractor has the requisite professional skills, business process and information technology knowledge, software implementation and project management expertise, integration capabilities, and skilled resources required to determine and specify the resource requirements for implementation of the Licensed Software, Hosting Software, and Third-Party Products in accordance with the Specifications, and to enable County to utilize the Licensed Software, Hosting Software, and Third-Party Products as set forth in the Specifications.

17.1.11 LEGAL AND ACCREDITATION/CERTIFICATION REQUIREMENTS

The Licensed Software will enable County to, and the Services and Deliverables will, comply with: (1) the Privacy and Security Laws (as defined in Section 19.10 (Compliance With Federal and State Confidentiality Requirements) to the extent the functionality is included in the Licensed Software); and (2) all applicable existing federal and state laws, including applicable accreditation/certification requirements, (collectively referred to as "**Legal Requirements**"). Further, Contractor represents and warrants that, so long as County is receiving Support Services, Contractor shall provide County with the functionality necessary to enable County to comply with all new, amended, or otherwise modified Legal Requirements, applicable to the Licensed Software at no additional charge to County. Furthermore, Contractor represents and warrants that in performing its obligations under this Agreement, it shall comply with all applicable laws, regulations, and rules that are in effect during the Support Term of this Agreement as they concern the subject matter of this Agreement. In the event the Licensed Software, Services, and/or Deliverables fails to perform as warranted under this Section 17.1.11 (Legal and Accreditation/Certification Requirements), Contractor shall, upon notice initiate commercially reasonable efforts to correct Errors, provide functionality, or bring the Licensed Software, Services, and/or Deliverables into compliance with the warranty as set forth in this Agreement at no additional charge to County. This warranty does not apply to Integral Third-Party Software that is not embedded within the Licensed Software.

17.1.12 TIME/DATE COMPLIANCE

Without limiting any other warranty or obligation specified in this Agreement, the Licensed Software is, and at all times will be, Time/Date Compliant. In addition to and cumulative of all other remedies available to County under this Agreement or at law, Contractor shall provide County, at no additional cost to County, any new

Revisions of the Licensed Software and Deliverables that prevents a breach of this warranty or corrects a breach of this warranty;

17.1.13 BACKGROUND CHECKS

(a) All Contractor Personnel performing work on-site under this Agreement shall undergo and pass, to the reasonable satisfaction of County, a background investigation as a condition of beginning and continuing to work under this Agreement. County shall use its discretion in determining the method of background clearance to be used, which may include, but is not limited to, fingerprinting (which Contractor may perform consistent with its processes and deliver all relevant documentation to County), provided any method is not prohibited by law. The fees associated with obtaining the background information shall be at the expense of the Contractor, regardless if the Contractor's staff passes or fails the background clearance investigation. County shall perform the background check and bill Contractor for the cost or deduct such amount from funds owed by County to Contractor.

(b) County may request that the Contractor's staff be immediately removed from working at any County facility at any time during the term of this Agreement. County will not provide to Contractor, nor to Contractor's staff any information obtained through County conducted background clearance.

(c) County may immediately, at the sole discretion of County, deny or terminate facility access to any Contractor Personnel that does not pass such investigation(s) to the reasonable satisfaction of County or whose background or conduct is incompatible with County facility access.

(d) Disqualification, if any, of the Contractor's staff, pursuant to this Section 17.1.13 (Background Checks), shall not relieve Contractor of its obligation to complete all work in accordance with the terms and conditions of this Agreement;

17.1.14 KNOWN PERFORMANCE ISSUES

There is no known existing pattern or repetition of customer complaints regarding the Licensed Software, Hosting Software, Third-Party Products, Deliverables, or Services, including functionality or performance issues, and that Contractor's engineers have not currently identified any repeating adverse impact on the Licensed Software, Hosting Software, Deliverables, or Services, including functionality or performance, for which the root cause is believed to be a flaw or defect in the Licensed Software, Hosting Software, Third-Party Products, Deliverables or Services. The foregoing warranty shall not extend to any specifications provided by County;

17.1.15 NO OFFSHORE WORK

All Hosting Services shall be performed and rendered within the United States. Contractor warrants that it will not transmit or make available any of County's Confidential Information, County's intellectual property or any County Property to any entity or individual outside the United States without prior written County Approval of such transmittal to an entity or person outside of the United States. County has Approved transmittal of such information to the entities and countries identified in Exhibit BB (County-Approved Contractor Entities and Countries);

17.1.16 INTEGRATION WARRANTY

The Licensed Software components, Hosting Software, and Third-Party Products are capable of interconnecting and/or Interfacing with each other, the third-party software and hardware identified in Exhibit M (Interfaces), and County Systems, either through integration or, as applicable, industry standard Interface protocols. As to County Systems (which utilize then-current industry standard Interface protocols) acquired after the Effective Date, the Licensed Software, Hosting Software, and Third-Party Products shall be capable of Interfacing with such County Systems using then-current industry standard Interface protocols. The Licensed Software, Hosting Software, and Third-Party Products must be Interoperable at the time it is provided to County and at all times thereafter during the Support Term;

17.1.17 HITECH TECHNICAL STANDARDS WARRANTY

The Licensed Software subject to certification by ONC-Authorized Testing and Certification Body ("**ONC-ATCB**") has been tested and certified by an ONC-ATCB as Certified EHR Technology for use as a Complete EHR in the ambulatory and inpatient practice settings, as applicable based on the intended primary practice setting use of the Licensed Software, pursuant to the HITECH Technical Standards. Further, Contractor represents and warrants, during the Support Term, Contractor shall provide to County at no additional charge: (a) software updates or replacement software, and Revisions thereto, if required, ("**HITECH Modifications**"), so that the Licensed Software meets the requirements of Certified EHR Technology for use as a Complete EHR in the ambulatory and inpatient practice settings, as applicable based on the intended primary practice setting use of the Licensed Software, at each stage of the Meaningful Use requirements, as applicable to such Licensed Software (referred to as the HITECH Technical Standards as defined below), as that term is defined by the Health Information Technology for Economic and Clinical Health Act of 2009 (the "**HITECH Act**"); (b) Contractor will provide the HITECH Modifications sufficiently in advance of the beginning of the first applicable reporting period identified under the HITECH Act or its implementing regulations as to each stage of the Meaningful Use requirements in order for County to receive the full amount of incentive payments, and to permit a reasonable period for County's implementation of the HITECH Modification; and (c) all implementation, training, and data conversion Services up to a total amount of Thirty Thousand Dollars ($30,000.00) for Professional Services, per stage of the Meaningful Use requirements, to enable County to use the HITECH Modifications that County may, in its discretion, elect to implement in becoming a "meaningful user." HITECH Modifications will be deemed Revisions and shall not be deemed New Software. If the Contractor does not

provide the HITECH Modifications as required hereunder and such failure is a cause of incentive payments under ARRA to County not being received or penalties being imposed, Contractor shall pay the amount of such incentive payments lost or deferred, or penalties imposed that is caused by the failure of Contractor to provide the HITECH Modifications, until Contractor has complied with the above warranty. Contractor is not responsible for County's failure to receive incentive payments or for penalties imposed resulting from an act or failure to act by County that is not the result of Contractor's failure to provide the HITECH Modifications. All such amounts shall be deemed direct damages under this Agreement and not subject to, excluded, reduced or limited by any limitations of liability in this Agreement. Without impacting the payments to County arising under this Section 17.1.17 (HITECH Technical Standards Warranty), County shall also have the option to terminate the Agreement in the event of a breach of the foregoing warranty that precludes County from achieving the functionality necessary to successfully obtain incentive payments or avoid penalties, and achieve performance objectives and measures and clinical quality measures, under ARRA. This warranty does not apply to Integral Third-Party Software that is not embedded within the Licensed Software.

17.1.18 HIPAA TRANSACTION AND RELATED CODE SET WARRANTY

Contractor represents and warrants that the Licensed Software will enable County to comply with HIPAA, Medicare Part D, and related transaction and code set standards as to the functions provided by the Licensed Software. Maintaining compliance with HIPAA is deemed to be a Legal Requirement for purposes of Section 17.1.11 (Legal and Accreditation/Certification Requirements). Further, Contractor represents and warrants that, as of the Effective Date:

(a) The Licensed Software complies with Version 5010 of the Accredited Standards Committee (ASC) X12 standards for HIPAA transactions;

(b) The Licensed Software complies with Version 4010/4010A1 of the ASC X12 standards for administrative transactions to enable County to use the Licensed Software to conduct electronic transactions with third-party systems that are not yet compliant with the latest versions of the standards;

(c) In addition, the Licensed Software must be capable of electronically transmitting prescriptions and prescription-related information to external recipients according to the National Council for Prescription Drug Program (NCPDP) SCRIPT 8.1 or 10.6 in addition to the adopted vocabulary standard for medications at 45 C.F.R. 170.207(d); and

(d) The Licensed Software (2012.XX) will enable County to comply with the ICD-10 (International Classification of Diseases, 10th Revision) code set standard for coding diagnoses and procedures. In addition, the Licensed Software will enable County to comply with the ICD-9 (International Classification of Diseases, 9th revision, Clinical) code set standard to conduct electronic transactions (using the appropriate coding for diagnoses and procedures)

with third-party systems that are not yet compliant with the latest versions of the standards.

This warranty does not apply to Integral Third-Party Software that is not embedded within the Licensed Software.

17.1.19 EXCLUDED PROVIDER WARRANTY

To the best of Contractor's Knowledge, neither Contractor nor any of its officers, directors, agents, or employees is currently, or has at any time been, debarred from, excluded or suspended from, or otherwise ineligible for participation in any state or federal health care program, including Medicare, Medicaid and Medi-Cal. Contractor hereby agrees to immediately notify County in writing upon becoming aware of any threatened, proposed, or actual exclusion or suspension of Contractor or any of its officers, directors, agents, or employees from any state or federal health care program, including Medicare, Medicaid and Medi-Cal. In the event that Contractor is excluded or suspended from participation in any state or federal health care program during the Term of this Agreement, this Agreement will, as of the effective date of such exclusion or breach, automatically terminate in accordance with Section 29.2 (Termination for Material Breach) as a non-curable breach. If at any time after the Effective Date it is determined that any of Contractor's officers, directors, agents or employees is excluded or suspended from participation in any state or federal health care program during the Term of this Agreement, such that Contractor is in breach of this Section 17.1.19 (Excluded Provider Warranty), such breach shall be a basis for termination in accordance with Section 29.2 (Termination for Material Breach) unless Contractor is able to cure such breach through the immediate discharge of the excluded or suspended personnel. Contractor shall notify County upon Contractor's determination that an officer, director, agent or employee is excluded or suspended and further shall notify County of the subsequent, remedial measure.

17.1.20 WARRANTY AGAINST CONTINGENT FEES

(a) Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon any contract or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

(b) For breach of this warranty, the County shall have the right to terminate this Agreement and, at its sole discretion, deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee;

17.1.21 NO AGREEMENT SUBORDINATION

During the Term of this Agreement, Contractor shall not subordinate this Agreement or any of its rights hereunder to any third-party without the prior written consent of County, and without providing in such subordination instrument for non-disturbance of County's use of the Licensed Software and Third-Party Products (or any part thereof) in accordance with this Agreement;

17.1.22 AGREEMENT NOT SUBJECT TO ANY LIENS

This Agreement and the Licensed Software licensed or acquired herein, are neither subject to any liens, encumbrances, or pledges nor subordinate to any right or claim of any third-party, including Contractor's creditors;

17.1.23 USE OF LICENSED SOFTWARE WITHOUT INTERRUPTION

County is entitled to use the Licensed Software, together with the Existing System, any Hardware purchased hereunder, and Contractor's Recommended Configuration, without interruption; and

17.1.24 INFORMATION FURNISHED TO COUNTY

As of the date furnished, no statement contained in writing in the Proposal contains any untrue statements about the prior experience or corporate description of Contractor, or omits any fact necessary to make such statement not misleading.

17.2 REMEDIES

County's remedies under this Agreement for the breach of the warranties set forth in this Agreement will include, but not be limited to, the repair or replacement by Contractor, at its own expense, of the non-conforming Licensed Software, Third-Party Products, and Hosting Software the specific remedies set forth in Exhibit E (Service Levels and Performance Standards), and other corrective measures afforded to County by Contractor under such Exhibit E (Service Levels and Performance Standards) and this Agreement.

17.3 BREACH OF WARRANTY OBLIGATIONS

Failure by Contractor to timely perform its obligations set forth in this Section 17 (Representations and Warranties) shall constitute a material breach, upon which, in addition to County's other rights and remedies set forth herein, County may terminate this Agreement, after written notice to Contractor and provision of a cure period in accordance with Section 29.2 (Termination for Material Breach).

17.4 REPRESENTATIONS AND WARRANTIES THROUGHOUT AGREEMENT

It is understood and agreed by the Parties that Contractor's representations and warranties are set forth throughout this Agreement and are not confined to this Section 17 (Representations and Warranties).

17.5 DISCLAIMER OF OTHER WARRANTIES

EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, NEITHER PARTY MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, QUIET ENJOYMENT, QUALITY OF INFORMATION, OR TITLE/NON-INFRINGEMENT, AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

18. INTELLECTUAL PROPERTY

18.1 WORK PRODUCT AND BACKGROUND INTELLECTUAL PROPERTY

"**Work Product**" expressly excludes Licensed Software (the license to which is provided in Section 3.1 (License Grant)) and Third-Party Products (the license to which is provided in Section 7 (Third-Party Products with Independent Conditions)) and shall mean:

(1) all Deliverables and all concepts, inventions (whether or not protected under patent laws), works of authorship, information, new or useful art, combinations, discoveries, formulae, algorithms, specifications, manufacturing techniques, technical developments, systems, computer architecture, artwork, scripts, designs, procedures, processes, and methods of doing business, regardless of form or media, Documentation, training materials, and shall include any derivatives or modifications to any of the foregoing (collectively "**Class 1 Work Product**") ; and

(2) County Project management documents and reports, including the Project Control Document, Status Reports, project work plans, and risk reports ("**Class 2 Work Product**"),

developed or produced by Contractor under this Agreement, whether acting alone or in conjunction with County or its employees, Users, affiliates or others.

18.2 OWNERSHIP

All Work Product is the sole and exclusive property of Contractor. Contractor may use such Work Product for internal purposes as well as for other clients so long as Contractor does not use any Confidential Information belonging to County or otherwise breach this Agreement. However, to the extent Class 1 Work Product constitutes or is incorporated into any Deliverables or Services or needed for the use of the Deliverables or Services, Contractor hereby grants to County a perpetual, irrevocable, fully paid up, royalty free, transferable (as provided in Section 32.17.2 (Assignment by County)), sub-licensable, worldwide, non-exclusive right and license to use, prepare derivative works, and otherwise fully exploit in connection with County's business, the Class 1 Work Product (and derivative works thereof created by County), provided that the Work Product (and/or derivative works thereof) is used in a manner that does not violate its license rights under this Agreement and is not commercially exploited in a manner inconsistent with its license right.

As to Class 2 Work Product, Contractor hereby grants to County a perpetual, irrevocable, fully paid up, royalty free, transferable, sub-licensable, worldwide, non-exclusive right and license to

use, prepare derivative works, and otherwise fully exploit in connection with County's business, the Class 2 Work Product (and derivative works thereof created by County).

18.3 USE OF COUNTY PROPERTY

County may, but is not required to (unless otherwise set forth in this Agreement or an applicable Statement of Work), provide certain hardware, software, data, databases, office space, security access, intellectual property, technologies or other services and materials to Contractor for the sole purpose of assisting Contractor in the performance of the Services contemplated by this Agreement ("**County Property**"). County hereby grants Contractor a non-exclusive, non-transferable license to use the County Property solely for County's benefit in connection with Contractor's performance of the Services. County may terminate the foregoing license at any time, without cause, on written notice to Contractor. Unless specifically authorized otherwise in the Statement of Work, Contractor shall use the County Property only in the form provided by County, without modification. In addition, Contractor will maintain and use County Property in accordance with any written instructions and/or specifications provided by County. County Property shall be considered Confidential Information of County. Except for the limited license provided in this Section 18.3 (Use of County Property), nothing contained in this Agreement shall be construed as granting Contractor any right, title, or interest in or to any of the County Property.

18.4 COUNTY LICENSED SOFTWARE

In the event County provides Contractor with access to or use of software licensed by County from third-parties, Contractor shall be responsible for (a) complying with all applicable third-party license agreements (disclosed to Contractor or Contractor Personnel in writing or by other means generally used by County to disseminate such information to employees or contractors, including electronic means); (b) indemnifying, defending, and holding harmless County and its directors, officers, agents, employees, members, subsidiaries and successors in interest from any breach by Contractor of such license agreements; and (c) treating all such software as Confidential Information of County.

19. CONFIDENTIALITY

19.1 PUBLICITY

(a) Contractor shall not disclose any details in connection with this Agreement to any person or entity except as may be otherwise provided hereunder or required by law. However, in recognizing the Contractor's need to identify its services and related clients to sustain itself, the County shall not inhibit the Contractor from publishing its role under this Agreement within the following conditions:

(i) Contractor shall develop all publicity material in a professional manner; and

(ii) During the Term of this Agreement, the Contractor shall not, and shall not authorize another to, publish or disseminate any commercial advertisements, press releases, feature articles, or other materials using the name of the County

without the prior written consent of the County Project Director. County shall not unreasonably withhold written consent.

(b) Contractor may, without the prior written consent of County, indicate in its proposals and sales materials that it has been awarded this Agreement with the County, provided that the requirements of this Section 19.1 (Publicity) shall apply.

19.2 CONFIDENTIAL INFORMATION DEFINED

Except as provided in Section 19.3 (Exclusions) below, each Party agrees that all information supplied by one Party and its affiliates and agents (collectively, the "**Disclosing Party**") to the other ("**Receiving Party**") including, without limitation, (a) source code, prices, trade secrets, mask works, databases, designs and techniques, models, displays and manuals; (b) any unpublished information concerning research activities and plans, marketing or sales plans, sales forecasts or results of marketing efforts, pricing or pricing strategies, costs, operational techniques, or strategic plans, and unpublished financial information, including information concerning revenues, profits, and profit margins; (c) any information relating to County's customers, patients, business partners, or personnel; (d) Personal Data (as defined below); and (e) Protected Health Information (as defined below), will be deemed confidential and proprietary to the Disclosing Party, regardless of whether such information was disclosed intentionally or unintentionally or marked as "confidential" or "proprietary" ("**Confidential Information**"). The foregoing definition shall also include any Confidential Information provided by either Party's contractors, subcontractors, agents, or vendors. To be deemed "Confidential Information", trade secrets and mask works must be plainly and prominently marked with restrictive legends.

19.3 EXCLUSIONS

Confidential Information will not include any information or material, or any element thereof, whether or not such information or material is Confidential Information for the purposes of this Agreement, to the extent any such information or material, or any element thereof: (a) has previously become or is generally known, unless it has become generally known through a breach of this Agreement or a similar confidentiality or non-disclosure agreement, obligation or duty; (b) was already rightfully known to the Receiving Party prior to being disclosed by or obtained from the Disclosing Party as evidenced by written records kept in the ordinary course of business or by proof of actual use by the Receiving Party, (c) has been or is hereafter rightfully received by the Receiving Party from a third-party (other than the Disclosing Party) without restriction or disclosure and without breach of a duty of confidentiality to the Disclosing Party; or (d) has been independently developed by the Receiving Party without access to Confidential Information of the Disclosing Party. It will be presumed that any Confidential Information in a Receiving Party's possession is not within exceptions (b), (c) or (d) above, and the burden will be upon the Receiving Party to prove otherwise by records and documentation.

19.4 TREATMENT OF CONFIDENTIAL INFORMATION

Each Party recognizes the importance of the other Party's Confidential Information. In particular, each Party recognizes and agrees that the Confidential Information of the other is critical to their respective businesses and that neither Party would enter into this Agreement

without assurance that such information and the value thereof will be protected as provided in this Section 19 (Confidentiality) and elsewhere in this Agreement. Accordingly, each Party agrees as follows: (a) the Receiving Party will hold any and all Confidential Information it obtains in strictest confidence and will use and permit use of Confidential Information solely for the purposes of this Agreement. Without limiting the foregoing, the Receiving Party shall use at least the same degree of care, but no less than reasonable care, to avoid disclosure or use of this Confidential Information as the Receiving Party employs with respect to its own Confidential Information of a like importance; (b) the Receiving Party may disclose or provide access to its responsible employees, agents, and consultants who have a need to know and may make copies of Confidential Information only to the extent reasonably necessary to carry out its obligations hereunder; and (c) the Receiving Party currently has, and in the future will maintain in effect and enforce, rules and policies to protect against access to or use or disclosure of Confidential Information other than in accordance with this Agreement, including without limitation written instruction to and agreements with employees, agents, or consultants who are bound by an obligation of confidentiality no less restrictive than set forth in this Agreement to ensure that such employees, agents, and consultants protect the confidentiality of Confidential Information, including this Section 19 (Confidentiality) and Exhibit R (Confidentiality and Assignment Agreement). The Receiving Party will require its employees, agents, and consultants not to disclose Confidential Information to third-parties, including without limitation customers, subcontractors, or consultants, without the Disclosing Party's prior written consent, will notify the Disclosing Party immediately of any unauthorized disclosure or use, and will cooperate with the Disclosing Party to protect all proprietary rights in and ownership of its Confidential Information.

19.5 NON-EXCLUSIVE EQUITABLE REMEDY

Each Party acknowledges and agrees that due to the unique nature of Confidential Information there can be no adequate remedy at law for any breach of its obligations hereunder, that any such breach or threatened breach may allow a Party or third-parties to unfairly compete with the other Party resulting in irreparable harm to such Party, and therefore, that upon any such breach or any threat thereof, each Party will be entitled to appropriate equitable remedies, and may seek injunctive relief from a court of competent jurisdiction without the necessity of proving actual loss, in addition to whatever remedies either of them might have at law or equity. Any breach of this Section 19 (Confidentiality) shall constitute a material breach of this Agreement and be grounds for immediate termination of this Agreement in the exclusive discretion of the non-breaching Party.

19.6 PERSONAL DATA

In connection with this Agreement and performance of the Services, Contractor may be provided or obtain, from County or otherwise, Personal Data, as defined below, pertaining to County's current and prospective personnel, directors and officers, agents, subcontractors, investors, patients, and customers and may need to Process such Personal Data and/or transfer it, all subject to the restrictions set forth in this Agreement and otherwise in compliance with all applicable foreign and domestic laws and regulations for the sole purpose of performing the Services.

19.7 TREATMENT OF PERSONAL DATA

Without limiting any other warranty or obligation specified in this Agreement, and in particular the confidentiality provisions of this Section 19 (Confidentiality), during the Term of this Agreement and thereafter in perpetuity, Contractor will not gather, store, log, archive, use, or otherwise retain any Personal Data in any manner and will not disclose, distribute, sell, share, rent, or otherwise transfer any Personal Data to any third-party, except as expressly required to perform its obligations in this Agreement or as Contractor may be expressly directed in advance in writing by County. Contractor represents and warrants that Contractor will use and Process Personal Data only in compliance with (a) this Agreement (including Section 32.41 (Healthe Intent Services) with regard to Healthe Intent Services), (b) County's then current privacy policy (available at https://intranet.ladhs.org/intracommon/public/DhsPolPro/polProSearchAction.cfm?unit=dhsintra&prog=dhsintra&ou=dhsintra), and (c) all applicable local, state, and federal laws and regulations (including, but not limited to, current and future laws and regulations relating to spamming, privacy, confidentiality, data security, and consumer protection).

19.8 RETENTION OF PERSONAL DATA

Contractor will not retain any Personal Data for any period longer than necessary for Contractor to fulfill its obligations under this Agreement. As soon as Contractor no longer needs to retain such Personal Data in order to perform its duties under this Agreement, Contractor will promptly return or destroy or erase all originals and copies of such Personal Data.

19.9 COMPELLED DISCLOSURES

To the extent required by applicable law or by lawful order or requirement of a court or governmental authority having competent jurisdiction over the Receiving Party, the Receiving Party may disclose Confidential Information in accordance with such law or order or requirement, subject to the following conditions: as soon as possible after becoming aware of such law, order, or requirement and prior to disclosing Confidential Information pursuant thereto, the Receiving Party will so notify the Disclosing Party in writing and, if possible, the Receiving Party will provide the Disclosing Party notice not less than five (5) Business Days prior to the required disclosure. The Receiving Party will use reasonable efforts not to release Confidential Information pending the outcome of any measures taken by the Disclosing Party to contest, otherwise oppose, or seek to limit such disclosure by the Receiving Party and any subsequent disclosure or use of Confidential Information that may result from such disclosure. The Receiving Party will cooperate with and provide assistance to the Disclosing Party regarding such measures. Notwithstanding any such compelled disclosure by the Receiving Party, such compelled disclosure will not otherwise affect the Receiving Party's obligations hereunder with respect to Confidential Information so disclosed.

19.10 COMPLIANCE WITH FEDERAL AND STATE CONFIDENTIALITY REQUIREMENTS

The County is subject to the Administrative Simplification requirements of the Health Insurance Portability and Accountability Act of 1996, as codified at 42 U.S.C. § 1320d through d-8 and as amended from time to time ("**HIPAA**"). Under this Agreement, the Contractor provides services to the County and the Contractor receives, has access to, and/or creates Protected Health Information in order to provide those services. Contractor acknowledges and agrees that all patient records and Protected Health Information shall be subject to the confidentiality and

disclosure provisions of HIPAA, HITECH Act, ARRA, and the regulations promulgated thereunder by the U.S. Department of Health and Human Services including the Standards for Privacy of Individually Identifiable Health Information and the Security Standards for Electronic Protected Health Information at 45 Code of Federal Regulations ("**C.F.R.**"), parts 142, 160, and 164, as the same may be amended from time to time, and any other applicable federal and state laws (including California Civil Code Section 56.10) (collectively, the "**Privacy and Security Laws**") and agrees to maintain the confidentiality of all such records and information in accordance with such laws. The Parties further agree that they shall abide by the provisions of Exhibit F (Business Associate Agreement) hereto with respect to information subject to HIPAA. Should County amend Exhibit F (Business Associate Agreement) as is necessary to comply with the requirements of the Privacy and Security Regulations (as such term is defined in the Business Associate Agreement), County will execute a Change Notice in accordance with Section 13.2 (Change Notices), which shall replace Exhibit F (Business Associate Agreement) with the updated Business Associate Agreement.

19.11 COUNTY DATA

All of the County Confidential Information, data, records, and information of County to which Contractor has access, or otherwise provided to Contractor under this Agreement ("**County Data**"), shall be and remain the property of County and County shall retain exclusive rights and ownership thereto. The data of County shall not be used by Contractor for any purpose other than as required under this Agreement, nor shall such data or any part of such data be disclosed, sold, assigned, leased, or otherwise disposed of to third-parties by Contractor or commercially exploited or otherwise used by or on behalf of Contractor, its officers, directors, employees, or agents.

19.12 RETURN OF CONFIDENTIAL INFORMATION

On County's written request or upon expiration or termination of this Agreement for any reason, Contractor will promptly: (a) return or destroy, at County's option, all originals and copies of all documents and materials it has received containing County's Confidential Information; (b) if return or destruction is not permissible under applicable law, continue to protect such information in accordance with the terms of this Agreement; and (c) deliver or destroy, at County's option, all originals and copies of all summaries, records, descriptions, modifications, negatives, drawings, adoptions and other documents or materials, whether in writing or in machine-readable form, prepared by Contractor, prepared under its direction, or at its request, from the documents and materials referred to in Subsection 19.12(a), and provide a notarized written statement to County certifying that all documents and materials referred to in Subsections 19.12(a) and (b) have been delivered to County or destroyed, as requested by County. On termination or expiration of this Agreement, County shall return or destroy all Contractor Confidential Information (excluding items licensed to County hereunder or that are required for use of the Deliverables and/or the Licensed Software), at Contractor's option.

20. SECURITY

20.1 IN GENERAL

Contractor will maintain and enforce safety and physical security procedures with respect to its access, use, and possession of County's Confidential Information, including Personal Data, (a) that are compliant with the requirements of Exhibit K (Information Security Requirements) and, to the extent not inconsistent, at least equal to industry standards for such types of locations, and (b) which provide reasonably appropriate technical and organizational safeguards against accidental or unlawful destruction, loss, alteration, or unauthorized disclosure or access of such information. Without limiting the generality of the foregoing, Contractor will take all reasonable measures to secure and defend its location and equipment against "hackers" and others who may seek, without authorization, to modify or access Contractor systems or the information found therein. Contractor will periodically test its systems for potential areas where security could be breached. Contractor will immediately report to County any breaches of security or unauthorized access to County's Confidential Information, including Personal Data, that Contractor detects or becomes aware of. Contractor will use diligent efforts to remedy such breach of security or unauthorized access in a timely manner and deliver to County a root cause assessment and future incident mitigation plan with regard to any breach of security or unauthorized access affecting the Confidential Information, including Personal Data. Contractor shall provide County all written details regarding Contractor's internal investigation regarding any security breach. Upon County's request, Contractor will provide a second more in-depth investigation and results of findings. Contractor agrees not to notify any regulatory authority nor any customer or consumer, on behalf of County unless County specifically requests in writing that Contractor do so. Contractor and County will work together to formulate a plan to rectify all security breaches.

20.2 UNAUTHORIZED ACCESS

In the course of furnishing the Services, Contractor shall not access, and shall not permit Contractor Personnel or entities within its control to access, County Systems (i) without County's express written authorization, or (ii) except as is necessary for Contractor to perform its obligations set forth in this Agreement, including in the Statements of Work hereunder. Such written authorization may subsequently be revoked by County at any time in its sole discretion. Further, any access shall be consistent with, and in no case exceed the scope of, any such authorization given by County. All County authorized connectivity or attempted connectivity to County Systems shall be only through County's security gateways and/or firewalls, and in conformity with applicable County security policies.

20.3 CONTRACTOR SYSTEMS

Contractor shall be solely responsible for all systems Contractor uses to access County Systems. Contractor shall ensure that its systems include up-to-date anti-viral software to prevent viruses from reaching County Systems through Contractor's systems. Contractor shall prevent unauthorized access to County Systems through the Contractor systems.

20.4 USE OF PERSONAL PORTABLE DEVICES

Without County's prior written authorization, under no circumstances will any Contractor Personnel connect to any County System or access, handle, or use any County Confidential Information and/or data, for purposes of downloading, extracting, storing, or transmitting the information and/or data through personally owned, rented, or borrowed equipment, including but not limited to, laptops, personal digital assistants, instant messaging devices, Universal Serial Bus ("**USB**") devices, and cell phones.

20.5 SECURITY BREACH

Contractor shall notify County of any security, or suspected security, breach of any County Confidential Information or data covered under applicable federal regulations set forth in 12 C.F.R. Part 30, or under California Civil Code 1798.82, or any other breach of Confidential Information immediately following discovery, if the information was, or is reasonably believed to have been acquired by an unauthorized person. Notification must be given in the most expedient time possible and without unreasonable delay. Written confirmation must be sent within three (3) days of discovery or notification of the breach or suspected breach.

20.6 ADDITIONAL PROCEDURES IN THE EVENT OF SECURITY BREACH OF PERSONAL DATA

Additional Procedures in the Event of Security Breach of Personal Data. Upon County's determination that a misuse or security breach of Personal Data has occurred or is reasonably possible Contractor shall fully cooperate with County in rectifying any misuse, including notifying all affected County customers. County shall determine, in its sole discretion, the content and means of delivery of the customer notice. Contractor will bear all reasonable costs and expenses for mitigation actions, to the extent required by law, incurred as a result of security breach primarily caused directly or indirectly by Contractor, including but not limited to, the administrative cost of opening and closing accounts, printing new checks, embossing new cards, notice, print and mailing, and obtaining credit monitoring services and identity theft insurance for County customers whose Personal Data has or may have been compromised.

20.7 ADDITIONAL PROCEDURES FOR THE IDENTIFICATION OF POSSIBLE INSTANCES OF IDENTITY THEFT

Contractor acknowledges that County has certain obligations to identify patterns, practices, and specific forms of activity that indicate the possible existence of identity theft (defined as fraud committed using the identifying information of another person), pursuant to Section 114 of the Fair and Accurate Credit Transactions Act of 2003 and its implementing regulations promulgated by the Office of the Comptroller of the Currency, 12 C.F.R. Part 41. Contractor, to the extent that it holds or otherwise has access to data that is subject to the Fair and Accurate Credit Transactions Act, agrees to establish, maintain and update reasonably effective policies and procedures to detect, prevent, and mitigate the risk of identity theft, and to promptly notify and report to County upon request, any instances where Contractor detects potential identity theft in the course of its duties pursuant to this Agreement. Contractor further agrees to immediately report to County any confirmed instances of identity theft. In furtherance thereof, Contractor agrees to be guided by the examples of identity theft "**Red Flags**" (defined as a pattern, practice, or specific activity that indicates the possible existence of identity theft) set forth in Supplement A to Appendix J to 12 C.F.R. Part 41. Upon request by County, Contractor agrees to confirm in

writing and, when specified, demonstrate to County its compliance with the requirements of this Section 20 (Security).

21. COMMUNICATION SYSTEMS AND ACCESS TO INFORMATION

During the Term of this Agreement, Contractor may receive access to County's software, computers, equipment, and electronic communications systems ("**County Systems**"), including but not limited to voicemail, email, customer databases, and internet and intranet systems. Such County Systems are intended for legitimate business use related to County's business. Contractor acknowledges that Contractor does not have any expectation of privacy as between Contractor and County in the use of or access to County Systems and that all communications made with such County Systems or equipment by or on behalf of Contractor are subject to County's scrutiny, use, and disclosure, in County's discretion. County reserves the right, for business purposes and activities, to monitor, review, audit, intercept, access, archive, and/or disclose materials sent over, received by or from, or stored in any of its electronic County Systems. This includes, without limitation, email communications sent by users across the internet and intranet from and to any domain name owned or operated by County. This also includes, without limitation, any electronic communication system that has been used to access any of County Systems. Contractor further agrees that Contractor will use all appropriate security, such as, for example, encryption and passwords (Contractor must provide passwords and keys to County), to protect County's Confidential Information from unauthorized disclosure (internally or externally) and that the use of such security does not give rise to any privacy rights in the communication as between Contractor and County. County reserves the right to override any security passwords to obtain access to voicemail, email, computer (and software or other applications) and/or computer disks on County Systems. Contractor also acknowledges that County reserves the right, for any business purposes and activities, to search all work areas (e.g., offices, cubicles, desks, drawers, cabinets, computers, computer disks, and files) and all personal items brought onto County property or used to access County Confidential Information or County Systems.

22. DISASTER RECOVERY/BUSINESS CONTINUITY

Contractor shall maintain for its Hosting Environment a business continuity plan (the "**Business Continuity Plan**") and a disaster recovery plan (the "**Disaster Recovery Plan**") (collectively the "**DR/BC Plan**"), and implement such plan in the event of any unplanned interruption to the Hosting Environment. On or before the Effective Date, Contractor shall provide County with a copy of Contractor's current DR/BC Plan. Contractor shall actively test, review, and update the DR/BC Plan on at least an annual basis using American Institute of Certified Public Accountants standard SSAE 16. Contractor shall promptly provide County with copies of all such updates to the DR/BC Plan. All updates shall be subject to the requirements of this Section 22 (Disaster Recovery/Business Continuity). In any event, any future updates or revisions to the DR/BC Plan shall be no less protective than the plan in effect as of the Effective Date. Contractor shall notify County of the completion of any audit of the DR/BC Plan and promptly provide County with such information with regards to such audit as set forth in Section 15.11 (Contractor Self-Audit) and Exhibit N (Additional Hosting Services Terms and Conditions). Contractor shall also promptly provide County with a summary of all reports resulting from any testing of the DR/BC Plan. Contractor shall maintain disaster avoidance procedures designed to safeguard County's data and the data processing capability, and availability of the Hosting Environment, throughout the

Term of this Agreement. Contractor shall immediately notify County of any disaster or other event in which the DR/BC Plan is activated. Without limiting Contractor's obligations under this Agreement, whenever a disaster causes Contractor to allocate limited resources between or among Contractor's customers, County shall receive at least the same treatment as comparable Contractor customers with respect to such limited resources. The provisions of Section 32.1 (Force Majeure) shall not limit Contractor's obligations under this Section 22 (Disaster Recovery/Business Continuity).

23. INDEMNIFICATION

23.1 GENERAL INDEMNIFICATION

Contractor shall indemnify, defend, and hold harmless County, including districts administered by County, and their elected and appointed officers, employees, and agents (collectively referred to for purposes of this Section 23.1 (General Indemnification) as "**County**") from and against any and all third-party claims, demands, damages, liabilities, losses, costs, and expenses, including defense costs and reasonable legal, accounting, and other expert, consulting, or professional fees, and legal research fees, to the extent arising from, connected with, or related to Contractor, Contractor's agents', employees' or subcontractors' acts, errors, or omissions in the performance of services or provision of products hereunder, including any workers' compensation suits, liability, or expense, arising from or connected with any Services provided by any person on behalf of Contractor, Contractor's agents, employees, or subcontractors pursuant to this Agreement. Any legal defense pursuant to Contractor's indemnification obligations under this Section 23.1 (General Indemnification) shall be conducted by Contractor and performed by counsel selected by Contractor.

Notwithstanding the preceding sentence, County shall have the right to participate in any such defense at its sole cost and expense, except that in the event Contractor fails to provide County with a full and adequate defense, as County reasonably determines, County shall be entitled to retain its own counsel and receive reimbursement from Contractor for all such costs and expenses incurred by County in doing so. Neither Party shall have the right to enter into any settlement, agree to any injunction or other equitable relief, or make any admission on behalf of County without the County's prior written Approval.

23.2 INTELLECTUAL PROPERTY INDEMNIFICATION

(a) Contractor shall indemnify, hold harmless, and defend County, including its officers, employees, and agents, from and against any and all third-party claims, demands, damages, liabilities, losses, costs, and expenses, including, but not limited to, defense costs and reasonable legal, accounting, and other expert, consulting, or professional fees and attorney's fees, as such are incurred, for or by reason of any actual or alleged infringement of any third-party's U.S. patent, copyright, or other Intellectual Property Right, or any actual or alleged unauthorized trade secret disclosure or misappropriation, arising from or related to the Licensed Software, Hosting Software, Work Product, and/or Deliverables (collectively, the "**Indemnified Items**") (collectively referred to for purposes of this Section 23.2(a) as "**Infringement Claim(s)**"), provided that the Indemnified Item has not been altered, revised, or modified by County in a manner that causes the alleged infringement. Notwithstanding the foregoing, Contractor shall have

no indemnity obligation for Infringement Claims arising from (A) the development of custom software code required by County and based on specifications provided by County; (B) use of the Indemnified Items in excess of the rights granted hereunder; or (C) County's failure to implement an update or enhancement to the Indemnified Items, provided, as to the Licensed Software and Hosting Software, Contractor provides the update or enhancement at no additional charge to County and provides County with written notice that implementing the update or enhancement would avoid the infringement. Any legal defense pursuant to Contractor's indemnification obligations under this Section 23.2(a) shall be limited to the Licensed Software and Hosting Software and be conducted by Contractor and performed by counsel selected by Contractor. Notwithstanding the foregoing, County shall have the right to participate in any such defense at its sole cost and expense. To the extent permitted by law or contract, Contractor shall pass through to County the indemnities and warranties provided to Contractor by third-parties with regard to intellectual property and infringement for Third-Party Products.

(b) County shall notify Contractor, in writing, as soon as practicable of any claim or action alleging such infringement or unauthorized disclosure. If any Indemnified Item hereunder becomes the subject of an Infringement Claim under Section 23.2(a) (Intellectual Property Indemnification), or in Contractor's opinion is likely to become the subject of such a claim, then, in addition to defending the claim and paying any damages and attorneys' fees as required above in Section 23.2(a) (Intellectual Property Indemnification), Contractor shall, at its option and in its sole discretion and at no cost to County, as remedial measures, either: (i) procure the right, by license or otherwise, for County to continue to use the Indemnified Items or affected component(s) thereof, or part(s) thereof, pursuant to this Agreement; or (ii) replace or modify (Contractor's obligation to modify in this Section 23.2(b) only applies to the Contractor-developed Licensed Software) the Indemnified Items or component(s) thereof with another software, service, item, or component(s) thereof of at least equivalent quality and performance capabilities, in County's determination, until it is determined by County that the Indemnified Items and all components thereof become non-infringing, non-misappropriating, and non-disclosing (hereinafter collectively for the purpose of this Section "**Remedial Act(s)**").

(c) If Contractor fails to complete the Remedial Acts described in Section 23.2(b) above within ninety (90) days of notice of the claim (and such time has not been extended by County in writing) then, County shall have the right, at its sole option, to elect to (i) terminate this Agreement with regard to the infringing Indemnified Items for default pursuant to Section 29.2 (Termination for Material Breach), in which case, in addition to other remedies available to County, Contractor shall reimburse County for all Implementation Fees paid by County to Contractor under the Agreement, and/or (ii) take such remedial acts as it determines to be commercially reasonable to mitigate any impairment of its use of the infringing Indemnified Items or damages (hereafter collectively referred to as "**County's Mitigation Acts**"). Contractor shall indemnify and hold harmless County for all amounts paid and all direct and indirect costs associated with County's Mitigation Acts. Failure by Contractor to pay such amounts within ten (10) Business Days of invoice by County shall, in addition to, and cumulative of all other

remedies, entitle County to immediately withhold all payments due to Contractor under this Agreement up to the amount paid by County in connection with County's Mitigation Acts.

23.3 INDEMNITIES THROUGHOUT AGREEMENT

It is understood and agreed by the Parties that Contractor's indemnity obligations are set forth throughout this Agreement and are not confined to this Section 23 (Indemnification).

24. LIMITATION OF LIABILITY AND STEP DOWN LIMITATION OF LIABILITY AMOUNT

24.1 LIMITATION OF LIABILITY

Proprietary and Confidential

Proprietary and Confidential

(a) Proprietary and Confidential;

(b) Proprietary and Confidential;

(c) Proprietary and Confidential;

(d) Proprietary and Confidential

(e) Proprietary and Confidential

(f) Proprietary and Confidential

(g) Proprietary and Confidential.

24.2 DIRECT DAMAGES

Proprietary and Confidential

(a) Proprietary and Confidential

(b) Proprietary and Confidential;

(c) Proprietary and Confidential;

(d) Proprietary and Confidential

(e) Proprietary and Confidential

Proprietary and Confidential

24.3 AMENDMENT TO PROVIDE A STEP DOWN LIMITATION OF LIABILITY AMOUNT

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

(a) Proprietary and Confidential;

(a) Proprietary and Confidential;

(b) Proprietary and Confidential;

(c) Proprietary and Confidential

(d) Proprietary and Confidential

(e) Proprietary and Confidential

(f) Proprietary and Confidential

Proprietary and Confidential

25. INSURANCE

25.1 GENERAL INSURANCE PROVISIONS

Without limiting Contractor's indemnification of County, and in the performance of this Agreement and until all of its obligations pursuant to this Agreement have been met, Contractor shall provide and maintain at its own expense insurance coverage satisfying the requirements specified in this Section 25 (Insurance). These minimum insurance coverage terms, types, and limits ("**Required Insurance**") also are in addition to and separate from any other contractual obligation imposed upon Contractor pursuant to this Agreement. County in no way warrants that the Required Insurance is sufficient to protect Contractor for liabilities which may arise from or relate to this Agreement.

25.2 EVIDENCE OF COVERAGE AND NOTICE

(a) Certificate(s) of insurance coverage ("**Certificate**") satisfactory to County, and a copy of an Additional Insured endorsement confirming County and its Agents (defined below)

has been given Insured status under the Contractor's General Liability policy, shall be delivered to County at the address specified in Section 25.2(d) below and provided prior to commencing services under this Agreement.

(b) Renewal Certificates shall be provided to County not less than ten (10) days following Contractor's policy expiration dates. County reserves the right to obtain complete, certified copies of any required Contractor and/or subcontractor insurance policies at any time.

(c) Certificates shall identify all Required Insurance coverage types and limits specified herein, reference this Agreement by name or number, and be signed by an authorized representative of the insurer(s). The Insured party named on the Certificate shall match the name of Contractor identified as the contracting party in this Agreement. Certificates shall provide the full name of each insurer providing coverage, its NAIC (National Association of Insurance Commissioners) identification number, its financial rating.

(d) Neither County's failure to obtain, nor County's receipt of, or failure to object to a non-complying insurance certificate or endorsement, or any other insurance documentation or information provided by the Contractor, its insurance broker(s) and/or insurer(s), shall be construed as a waiver of any of the Required Insurance provisions.

Certificates and copies of any required endorsements shall be sent to the County Project Director at the address specified in Exhibit X (County Key Personnel).

Contractor also shall promptly report to County any injury or property damage accident or incident, including any injury to a Contractor employee occurring on County property, and any loss, disappearance, destruction, misuse, or theft of County property, monies, or securities entrusted to Contractor. Contractor also shall promptly notify County of any third-party claim or suit filed against Contractor or any of its subcontractors which arises from or relates to this Agreement, and could result in the filing of a claim or lawsuit against Contractor and/or County.

25.3 ADDITIONAL INSURED STATUS AND SCOPE OF COVERAGE

The County of Los Angeles, its special districts, elected officials, officers, agents, employees and volunteers (collectively "**County and its Agents**") shall be provided additional insured status under Contractor's General Liability policy with respect to liability arising out of Contractor's ongoing and completed operations performed on behalf of County. County and its Agents additional insured status shall apply with respect to liability and defense of suits arising out of Contractor's acts or omissions, whether such liability is attributable to Contractor or to County. The full policy limits and scope of protection also shall apply to County and its Agents as an additional insured, even if they exceed the County's minimum Required Insurance specifications herein. Use of an automatic additional insured endorsement form is acceptable providing it satisfies the Required Insurance provisions herein.

25.3.1 CANCELLATION OF INSURANCE

Except in the case of cancellation for non-payment of premium, Contractor's insurance policies shall provide, and Certificates shall specify, that County shall receive notice in accordance with policy provisions of any cancellation of the Required Insurance. Ten (10) days prior notice may be given to County in event of cancellation for non-payment of premium.

25.3.2 INSURER FINANCIAL RATINGS

Coverage shall be placed with insurers acceptable to the County with A.M. Best ratings of not less than A:VII unless otherwise Approved by County.

25.3.3 CONTRACTOR'S INSURANCE SHALL BE PRIMARY

Contractor's insurance policies, with respect to any claims related to this Agreement, shall be primary with respect to all other sources of coverage available to Contractor. Any County maintained insurance or self-insurance coverage shall be in excess of and not contribute to any Contractor coverage.

25.3.4 WAIVERS OF SUBROGATION

To the fullest extent permitted by law, the Contractor hereby waives its rights and its insurer(s)' rights of recovery against County under all the Required Insurance for any loss arising from or relating to this Agreement. The Contractor shall require its insurers to execute any waiver of subrogation endorsements which may be necessary to effect such waiver.

25.3.5 SUBCONTRACTOR INSURANCE COVERAGE REQUIREMENTS

Contractor shall include all subcontractors as insureds under Contractor's own policies, or shall provide County with each subcontractor's separate evidence of insurance coverage. Contractor shall be responsible for verifying each subcontractor complies with the Required Insurance provisions herein, and shall require that each subcontractor name County and Contractor as additional insureds on the subcontractor's General Liability policy. Contractor shall obtain County's prior review and Approval of any subcontractor request for modification of the Required Insurance.

25.3.6 DEDUCTIBLES AND SELF-INSURED RETENTIONS

Contractor's policies shall not obligate the County to pay any portion of any Contractor deductible or SIR.

25.3.7 CLAIMS MADE COVERAGE

If any part of the Required Insurance is written on a claims made basis, any policy retroactive date shall precede the Effective Date of this Agreement. Contractor

understands and agrees it shall maintain such coverage for a period of not less than three (3) years following Agreement expiration, termination, or cancellation.

25.3.8 APPLICATION OF EXCESS LIABILITY COVERAGE

Contractors may use a combination of primary, and excess insurance policies which provide coverage as broad as ("follow form" over) the underlying primary policies, to satisfy the Required Insurance provisions.

25.3.9 SEPARATION OF INSUREDS

All liability policies shall provide cross-liability coverage as would be afforded by the standard ISO (Insurance Services Office, Inc.) separation of insureds provision with no insured versus insured exclusions or limitations.

25.3.10 ALTERNATIVE RISK FINANCING PROGRAMS

County reserves the right to review, and then Approve, Contractor use of self-insurance, risk retention groups, risk purchasing groups, pooling arrangements, and captive insurance to satisfy the Required Insurance provisions. County and its Agents shall be designated as an Additional Covered Party under any Approved program.

25.3.11 COUNTY REVIEW AND APPROVAL OF INSURANCE REQUIREMENTS

The County reserves the right to review and adjust the Required Insurance provisions, conditioned upon County's determination of changes in risk exposures.

25.4 INSURANCE COVERAGE REQUIREMENTS

25.4.1 COMMERCIAL GENERAL LIABILITY INSURANCE

Providing scope of coverage equivalent to ISO policy form CG 00 01, naming County and its Agents as an additional insured, with limits of not less than:

General Aggregate	$4 million
Products/Completed Operations Aggregate	$2 million
Personal and Advertising Injury	$2 million
Each Occurrence	$2 million

25.4.2 AUTOMOBILE LIABILITY INSURANCE

Providing scope of coverage equivalent to ISO policy form CA 00 01 with limits of not less than One Million Dollars ($1,000,000) for bodily injury and property damage, in combined or equivalent split limits, for each single accident. Insurance shall cover liability arising out of Contractor's use of autos pursuant to this

Agreement, including owned, leased, hired, and/or non-owned autos, as each may be applicable.

25.4.3 WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY

Insurance or qualified self-insurance satisfying statutory requirements, which includes Employers' Liability coverage with limits of not less than One Million Dollars ($1,000,000) per accident.

25.4.4 PROFESSIONAL LIABILITY/ERRORS AND OMISSIONS

Insurance covering Contractor's liability arising from or related to this Contract, with limits of not less than One Million Dollars ($1,000,000) per claim and Two Million Dollars ($2,000,000) aggregate. Further, Contractor understands and agrees it shall maintain such coverage for a period of not less than three (3) years following this Agreement's expiration, termination, or cancellation.

25.5 FAILURE TO MAINTAIN INSURANCE

Contractor's failure to maintain or to provide acceptable evidence that it maintains the Required Insurance acceptable to County shall constitute a material breach of the Agreement, upon which County immediately may withhold payments due to Contractor and/or suspend this Agreement.

26. WITHHOLD REMEDY

In addition to, and cumulative to all other remedies in law, at equity and provided under this Agreement, in the event Contractor is in material default of its duties or obligations under this Agreement and it fails to cure the default within thirty (30) days after receipt of written notice of default from County, County may, without waiving any other rights under this Agreement, elect to withhold from the payments due to Contractor under this Agreement during the period beginning with the thirty first (31st) day after Contractor's receipt of notice of default, and ending on the date that the default has been cured to the reasonable satisfaction of County, an amount that is in proportion to the magnitude of the default or the Service that Contractor is not providing, as determined in County's reasonable discretion. Upon curing of the default by Contractor, County will cause the withheld payments to be paid to Contractor, without interest. In the event it is Finally Determined that County has withheld a payment in bad faith, such payment shall promptly be paid to Contractor, plus interest at the maximum legal rate.

27. DISPUTE RESOLUTION PROCEDURE

It is the intent of the Parties that all disputes arising under this Agreement be resolved expeditiously, amicably, and at the level within each Party's organization that is most knowledgeable about the disputed issue. The Parties understand and agree that the procedures outlined in this Section 27 (Dispute Resolution Procedure) are not intended to supplant the routine handling of inquiries and complaints through informal contact with their respective managers. Accordingly, for purposes of the procedures set forth in this Section 27 (Dispute Resolution Procedure), a "**Dispute**" shall mean any action, dispute, claim, or controversy of any

kind, whether in contract or tort, statutory or common law, legal or equitable, now existing or hereafter arising under or in connection with, or in any way pertaining to this Agreement.

(e) Contractor and County agree to act with urgency to mutually resolve any Disputes which may arise with respect to this Agreement. All such Disputes shall be subject to the provisions of this Section 27 (Dispute Resolution Procedure) (such provisions shall be collectively referred to as the "**Dispute Resolution Procedure**"). Time is of the essence in the resolution of Disputes.

(f) Contractor and County agree that, the existence and details of a Dispute notwithstanding, both Parties shall continue without delay their performance hereunder, except for any performance which County reasonably determines should be delayed as a result of such Dispute.

(g) Subject to the provisions of Section 15 (Invoices and Payments), if Contractor fails to continue without delay its performance hereunder which County, in its sole discretion, determines should not be delayed as a result of such Dispute, then any additional costs which may be incurred by Contractor or County as a result of Contractor's failure to continue to so perform shall be borne by Contractor, and Contractor shall make no claim whatsoever against County for such costs. Contractor shall promptly reimburse County for such County costs, as determined by County, or County may deduct all such additional costs from any amounts due to Contractor from County.

If County fails to continue without delay to perform its responsibilities under this Agreement which County determines should not be delayed as a result of such Dispute, then any additional costs incurred by Contractor or County as a result of County's failure to continue to so perform shall be borne by County, and County shall make no claim whatsoever against Contractor for such costs. County shall promptly reimburse Contractor for all such additional Contractor costs subject to the Approval of such costs by County.

(h) In the event of any Dispute between the Parties with respect to this Agreement, Contractor and County shall submit the matter to their respective Project Managers for the purpose of endeavoring to resolve such Dispute.

(i) In the event that the Project Managers are unable to resolve the Dispute within a reasonable time not to exceed ten (10) days from the date of submission of the Dispute to them, then the matter shall be immediately submitted to the Parties' respective Project Directors for further consideration and discussion to attempt to resolve the Dispute.

(j) In the event that the Project Directors are unable to resolve the Dispute within a reasonable time not to exceed ten (10) days from the date of submission of the Dispute to them, then the matter shall be immediately submitted to Contractor's Executive Vice President of Client Org (or equivalent position) and the Director. These persons shall have ten (10) days to attempt to resolve the Dispute.

(k) In the event that at these levels, there is not a resolution of the Dispute acceptable to both Parties, then each Party may assert its other rights and remedies provided under this Agreement and/or its rights and remedies as provided by law.

(l) All disputes utilizing this Dispute Resolution Procedure shall be documented in writing by each Party and shall state the specifics of each alleged dispute and all actions taken. The Parties shall act in good faith to resolve all disputes. At all three (3) levels described in this Section 27 (Dispute Resolution Procedure), the efforts to resolve a Dispute shall be undertaken by conference between the Parties' respective representatives, either orally, by face to face meeting or by telephone, or in writing by exchange of correspondence.

(m) Notwithstanding any other provision of this Agreement, County's right to terminate this Agreement or either Party's right to seek injunctive relief to enforce the provisions of Section 19 (Confidentiality) shall not be subject to this Dispute Resolution Procedure. The preceding sentence is intended only as a clarification of the Parties' rights and shall not be deemed to impair any claims that either Party may have or a Party's rights to assert such claims after any such termination or such injunctive relief has been obtained.

(n) Contractor shall bring to the attention of the County Project Manager and/or County Project Director any Dispute between the County and the Contractor regarding the performance of Services as stated in this Agreement.

28. DISPUTE RESOLUTION WITH CONTRACTOR AND OTHER VENDORS

Contractor shall, on County's request, participate in dispute resolution in accordance with this Agreement with County and Contractor and County's third-party vendors, including Hardware vendors, to resolve any disputes between and/or among such vendors, including County and Contractor, as to responsibility by any particular vendor for issues arising from performance, warranties, and other issues relating to the Licensed Software, Hardware, and Recommended Configuration.

29. TERMINATION

29.1 TERMINATION FOR INSOLVENCY

(a) The County may terminate this Agreement forthwith in the event of the occurrence of any of the following:

(i) Insolvency of the Contractor. Contractor shall be deemed to be insolvent if it has ceased to pay its debts for at least sixty (60) days in the ordinary course of business or cannot pay its debts as they become due, whether or not a petition has been filed under the Bankruptcy Code and whether or not the Contractor is insolvent within the meaning of the Bankruptcy Code; provided that Contractor shall not be deemed insolvent if it has ceased in the normal course of business to pay its debts which are disputed in good faith and which are not related to this Agreement as determined by County.

(ii) The filing of a voluntary or involuntary petition regarding the Contractor under the Federal Bankruptcy Code (which involuntary petition is not dismissed within ninety (90) days, provided that Contractor cooperates with County during such period with regard to any transition planning that County initiates in accordance with Section 29.8 (Termination Transition Services);

(iii) The appointment of a receiver or trustee for the Contractor; or

(iv) The execution by the Contractor of a general assignment for the benefit of creditors.

(b) The rights and remedies of the County provided in this Section 29.1 (Termination for Insolvency) shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

29.2 TERMINATION FOR MATERIAL BREACH

(a) County may terminate this Agreement, any Statement of Work, in whole or in part: (i) if Contractor materially breaches any of its duties or obligations under the Agreement or any Statement of Work and fails to cure such breach within thirty (30) calendar days after written notice is provided by County (and assuming Contractor had previously been notified of the acts giving rise to the termination); (ii) if Contractor materially breaches any duty or obligation under the Agreement or any Statement of Work, which is not capable of being cured, within thirty (30) calendar days after written notice is provided by County; or (iii) if Contractor commits numerous breaches of its duties or obligations under the Agreement or any Statement of Work, which in the aggregate are material, and fails to cure such numerous breaches within thirty (30) calendar days after written notice is provided by County. In the event of Contractor's failure to cure any such breach or breaches, or, as applicable, submit an acceptable plan of correction, within the applicable cure period, County may terminate this Agreement or any Statement of Work, as of the date set forth in such written notice, which date of termination shall in no event be less than thirty (30) calendar days after the date of the notice of termination. In the event of any breach by Contractor of its material obligations under a Statement of Work, County's obligation to make any payments yet to be made and for which work has not been delivered under such Statement of Work shall be terminated. Termination of such payment obligations shall be in addition to any other rights or remedies that County may have in the event of any such breach or alleged breach.

(b) In the event that County fails to pay Contractor undisputed invoices properly due and owing to Contractor under this Agreement exceeding in the aggregate Fifty Thousand Dollars ($50,000) of the total invoices by the specified due date and fails to cure such default within sixty (60) days of notice from Contractor of its intention to terminate for failure to make such payment, Contractor may elect, by written notice to County, to terminate either the affected Statement(s) of Work or this Agreement. Contractor acknowledges and agrees that this Section 29.2(b) (Termination for Material Breach) describes Contractor's sole right to terminate any Statement of Work or this Agreement

and Contractor hereby waives any other rights it may have to terminate this Agreement or any Statement of Work.

(c) In the event that the County terminates this Agreement in whole or in part as provided in Section 29.2 (Termination for Material Breach), the County may procure, upon such terms and in such manner as the County may deem appropriate, goods and services similar to those so terminated. Contractor shall be liable to the County for any and all excess costs incurred by the County, as determined by the County, for such similar goods and services. Contractor shall continue the performance of this Agreement to the extent not terminated under the provisions of this Section 29.2 (Termination for Material Breach).

(d) If, after the County has given notice of termination under the provisions of this Section 29.2 (Termination for Material Breach), it is determined by the County that the Contractor was not in default under the provisions of this Section 29.2 (Termination for Material Breach), the rights and obligations of the Parties shall be the same as if the notice of termination had been issued pursuant to Section 29.6 (Termination for Convenience).

29.3 TERMINATION FOR REGULATORY NON-COMPLIANCE

In the event Contractor's relationship with County under this Agreement is identified in writing by any regulator (including any governmental body or accreditation/certification organization (e.g., Joint Commission, Certification Commission for Health Information Technology ("**CCHIT**"), or DNV Healthcare Inc.)) having jurisdiction over County, to present a risk to County or its customers that requires correction, County shall notify Contractor of such identification. In the event the Parties are unable for any reason through reasonable efforts to resolve the identified issue(s) to the satisfaction of the relevant regulator within the timeframe mandated by the regulator, County may terminate this Agreement for convenience and without obligation to pay any termination fee or penalty to Contractor. County agrees to pay Contractor for all products and services delivered prior to the effective date of termination.

29.4 TERMINATION FOR BREACH OF WARRANTY TO MAINTAIN COMPLIANCE WITH COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

Failure of the Contractor to maintain compliance with the requirements set forth in Section 32.34 (Contractor's Warranty of Adherence to County's Child Support Compliance Program) shall constitute default under this Agreement. Without limiting the rights and remedies available to the County under any other provision of this Agreement, failure of the Contractor to cure such default within ninety (90) calendar days of written notice shall be grounds upon which the County may terminate this Agreement pursuant to Section 29.2 (Termination for Material Breach) and pursue debarment of the Contractor, pursuant to County Code Chapter 2.202.

29.5 TERMINATION FOR IMPROPER CONSIDERATION

(a) The County may, by written notice to the Contractor, immediately terminate the right of the Contractor to proceed under this Agreement if it is found that consideration, in any form, was offered or given by the Contractor, either directly or through an intermediary,

to any County officer, employee, or agent with the intent of securing this Agreement or securing favorable treatment with respect to the award, amendment, or extension of this Agreement or the making of any determinations with respect to the Contractor's performance pursuant to this Agreement. In the event of such termination, the County shall be entitled to pursue the same remedies against the Contractor as it could pursue in the event of default by the Contractor.

(b) Contractor shall immediately report any attempt by a County officer or employee to solicit such improper consideration. The report shall be made either to the County manager charged with the supervision of the employee or to the County Auditor-Controller's Employee Fraud Hotline at (800) 544-6861.

(c) Among other items, such improper consideration may take the form of cash, discounts, service, the provision of travel or entertainment, or tangible gifts.

29.6 TERMINATION FOR CONVENIENCE

County may terminate this Agreement, in whole or in part, or any Statement of Work, Service, or Deliverable immediately upon thirty (30) days written notice to Contractor without reason, penalty, or breach of this Agreement, notwithstanding that the Contractor is in compliance with all delivery, performance, or other requirements. In the event of any such termination, Contractor shall be compensated for any Services properly performed prior to the effective date of the termination, but any compensation allocated to Services that were yet to be rendered with regard to any canceled aspect of the Services shall then be eliminated. Termination under this Section 29.6 (Termination for Convenience) shall not affect the license granted in Section 3 (Licensed Software), which shall continue in perpetuity.

29.7 EFFECT OF TERMINATION

Upon expiration or termination of this Agreement, in whole or in part, or any Statement of Work, Service, or Deliverable, unless otherwise specified by County in writing:

(a) Contractor and County shall continue the performance of this Agreement to the extent not terminated.

(b) Contractor shall cease to perform the Services being terminated on the date and to the extent specified in such notice and provide to County all completed Services and Services in progress, in a media reasonably requested by County.

(c) County will pay to Contractor all sums due to Contractor for Services properly performed and products delivered through the effective date of such expiration or termination (prorated as appropriate).

(d) Contractor shall return to County all monies paid by County, yet unearned by Contractor, including any prepaid Support Services Fees, if applicable.

(e) Notwithstanding the foregoing, upon termination for default pursuant to Section 29.2 (Termination for Material Breach) during Implementation Services, Contractor shall

return all monies paid by County to Contractor during such Implementation Services, and County will return to Contractor all products of such terminated Implementation Services, subject to continued use as needed to maintain operations, to ensure health care to County's patients is not negatively impacted, and otherwise mitigate damages during an orderly transition to alternative systems.

(f) County shall have the rights set forth in Section 3 (Licensed Software) and Section 4 (Escrow of Source Materials) to access and use the Source Material as set forth therein, including without limitation the right to modify all source and object code versions of the Licensed Software provided one of the Release Conditions described in Section 4.1 (Escrow Agent and Release Conditions) has occurred which would permit County to use the Source Material.

(g) Expiration or termination of this Agreement for any reason will not release either Party from any liabilities or obligations set forth in this Agreement which (i) the Parties have expressly agreed in writing will survive any such expiration or termination, or (ii) remain to be performed or by their nature would be intended to be applicable following any such expiration or termination.

(h) In the case of expiration or termination of the Agreement, (i) all Statement(s) of Work that have not been completed shall be deemed terminated in accordance with this Section 29 (Termination) as of the effective date of such termination, and (ii) the Support Term shall be deemed terminated.

(i) Contractor understands and agrees that County has obligations that it cannot satisfy without use of the Licensed Software provided to County hereunder or an equivalent system, and that a failure to satisfy such obligations could result in irreparable damage to County and the entities it serves. Therefore, Contractor agrees that in the event of any expiration or termination of this Agreement, Contractor shall fully cooperate with County in the transition of County to a new system, toward the end that there be no interruption of County's day to day operations due to the un-Availability of the Licensed Software during such transition, as provided in Section 29.8 (Termination Transition Services).

(j) Contractor shall promptly return to County any and all Confidential Information, including County Data, that relate to that portion of the Agreement and Services terminated by County, except in instances where Contractor is required by law to maintain such County Data and subject to continuing protection in accordance with the confidentiality provisions of this Agreement.

29.8 TERMINATION TRANSITION SERVICES

Upon the expiration of this Agreement or its termination by either Party for any reason, including the breach of this Agreement by the other Party, the rights of County shall in any and all events be provided as set forth in this Section 29.8 (Termination Transition Services). Unless the Parties have specifically agreed upon a termination transition plan prior to the time of termination (the "**Termination Transition Plan**"), the rights of County upon any termination shall be as set forth in this Section 29.8 (Termination Transition Services). If a Termination

Transition Plan has been agreed to, then the rights of County upon any expiration or termination of this Agreement shall be as set forth in the most recent Approved Termination Transition Plan, and also as set forth in this Section 29.8 (Termination Transition Services). In the event of any inconsistency between this Section 29.8 (Termination Transition Services) and the applicable Termination Transition Plan, this Section 29.8 (Termination Transition Services) shall govern. If no Termination Transition Plan has been agreed to by the Parties at the time of any expiration or termination of this Agreement, then Contractor shall continue to perform the Services under the Agreement, at performance standards and Service Levels in effect at the time of termination or expiration, as well as the termination transition Services, which Services shall be provided as set forth in this Section 29.8 (Termination Transition Services). Contractor shall provide County with all of the Services and all of the termination transition Services as provided in this Section 29.8 (Termination Transition Services) and in the then most recent version of the Termination Transition Plan, if any. The duty of Contractor to provide such Services shall be conditioned on County continuing to comply with its obligations under the Agreement, including payment of all fees. Contractor shall have no right to withhold or limit its performance or any of such termination transition Services on the basis of any alleged breach of this Agreement by County, other than a failure by County to timely pay the amounts due hereunder during the termination transition period. County shall have the right to seek specific performance of this Section 29.8 (Termination Transition Services) in any court of competent jurisdiction and Contractor hereby waives any defense that damages are an adequate remedy. Compliance with this Section 29.8 (Termination Transition Services) by either Party shall not constitute a waiver or estoppel with regard to any rights or remedies available to the Parties. Contractor will (a) meet with County as soon as practicable after a notice of termination or notice of a decision to not extend this Agreement has been given, to discuss any potential modifications to the then most current Termination Transition Plan, if any, (b) use all commercially reasonable efforts to assist County in effecting a transition of the Services provided by Contractor hereunder, in accordance with Contractor's Best Practices, to County or another vendor chosen by County, and (c) be compensated for transition related Services and costs by payment by County in accordance with the rates set forth in this Agreement. Contractor will provide termination transition Services for a period defined in the Termination Transition Plan, if any, but in no event less than six (6) months following the expiration or termination of this Agreement. Thereafter, Contractor shall provide extensions of termination transition Services as requested by County in serial thirty (30) calendar day extension terms for up to an additional twelve (12) months. The total period of termination transition Services, including all extensions provided for herein, shall not exceed eighteen (18) months.

29.9 SURVIVAL

The following Sections shall survive any termination or expiration of this Agreement: Sections 3.1 (License Grant) (except in the event of termination for breach by County of Sections 3 (Licensed Software), 18 (Intellectual Property), or 19 (Confidentiality)), 4 (Escrow of Source Materials), 9.11 (Damage to County Facilities), 9.12 (Unapproved Work), 12.6 (Failed Testing), 14.8(Non-Appropriation of Funds), 14.9 (County's Obligation for Future Fiscal Years), 15.5 (No Payment for Services Provided Following Expiration/Termination of Agreement), 15.6 (Holdbacks), 15.10 (Record Retention and Inspection/Audit Settlement), 15.13 (Verification of Licensee Costs By Government), 17.1.1 (Authority), 17.1.4 (Non-Infringement), 17.3 (Breach of Warranty Obligations), 18 (Intellectual Property), 19 (Confidentiality), 20.5 (Security Breach),

20.6 (Additional Procedures in the Event of Security Breach of Personal Data), 20.7 (Additional Procedures for the Identification of Possible Instances of Identify Theft), 23 (Indemnification), 24 (Limitation of Liability and Step Down Limitation of Liability Amount), 25.3.7 (Claims Made Coverages), 25.5 (Failure to Maintain Insurance), 26 (Withhold Remedy), 29.7 (Effect of Termination), 29.8 (Termination Transition Services), 29.9 (Survival), 32 (Miscellaneous), 2 (In-House Solution) of Exhibit N (Additional Hosting Services Terms and Conditions), 3.3 (Services Not To Be Withheld or Suspended) of Exhibit N (Additional Hosting Services Terms and Conditions), 4 (Confidentiality) of Exhibit N (Additional Hosting Services Terms and Conditions), and 7.11 (Force Majeure Not Applicable) of Exhibit N (Additional Hosting Services Terms and Conditions).

30. MULTI-VENDOR ENVIRONMENT

30.1 CROSS-OVER ISSUES

Contractor acknowledges that it will be delivering the Services in a multi-vendor environment, with County and County Designee(s) providing services relating to the County Systems. Effective operation of such an environment requires not only the cooperation among all service providers, including Contractor, but also collaboration in addressing service-related issues that may cross over from one service area or provider to another and related to the Services ("**Cross-Over Issues**"). As part of the Services, Contractor will actively provide and support tasks associated with operating and maintaining a collaborative approach to Cross-Over Issues in the same manner as if the Contractor Service relevant to the Cross-Over Issue was being provided in-house by County rather than by Contractor.

30.2 SERVICE INTERDEPENDENCIES

Contractor shall use commercially reasonable efforts to identify all work efforts and Deliverables of which Contractor has knowledge, whether performed by Contractor, subcontractors, Contractor third-party vendors, County, or County Designee(s) that may impact the delivery of the Services (the "**Service Interdependency**"). For each Service Interdependency, Contractor shall verify that project plans, detailed to the task level with individual performance responsibility identified, have been developed by the party responsible for the work or Deliverable, and validate that each project plan reflects delivery of the work or Deliverables required by Contractor to deliver the Services in accordance with the Specifications. Contractor shall implement processes to insure it is receiving regular reports, from all parties responsible for a Service Interdependency, with sufficient data to enable it to validate that each Service Interdependency is proceeding in accordance with the timing applicable to that Service Interdependency, and that the then current timing of delivery of the work or Deliverables as to each Service Interdependency will not adversely impact Contractor's ability to deliver the Services in accordance with the Specifications. Contractor shall take reasonable steps to validate that the data it receives in the reporting process is supported by tangible progress on the Service Interdependency. Within a reasonable period of time of knowledge of any Service Interdependency, Contractor shall provide County with a written report outlining the scope and nature of such Service Interdependency and Contractor's proposed resolution to remedy such Service Interdependency.

30.3 CRITICAL PATH ESCALATION ISSUES

Critical Path Escalation Issues shall be identified and described in detail by Contractor or County (as appropriate) in writing and delivered electronically by one Party's Project Manager to the other Party's Project Manager. The Contractor Project Director and the County Project Director shall seek to resolve the issue(s) or implement a mutually agreed to corrective action plan and notify the DHS CIO or designee and Contractor Lead Partner the escalation process has been initiated. If an agreed to resolution or corrective action plan as to a Critical Path Escalation Issue is not achieved by the second (2nd) Business Day after the date of delivery of the issue by Contractor or County (as appropriate), the issues shall be escalated to the DHS CIO or designee and Contractor Lead Partner. Escalation requires that the Contractor Project Director and the County Project Director frame the escalated issue(s) concisely and submit a jointly prepared document that identifies areas of agreement, remaining areas of disagreement, resolution recommendations of each Party, and all relevant supporting information developed by the Parties relating to the Critical Path Escalation Issue. The DHS CIO or designee and Contractor Lead Partner shall have a telephonic or in person conference to reach final resolution within two (2) Business Days after the joint escalation memorandum has been submitted.

31. RELATIONSHIP ENHANCING COMMITMENTS

31.1 EXECUTIVE TEAM PARTICIPATION

To ensure a direct line of communication between County and Contractor's executive management team, which team shall include the Contractor's Executive Vice President Of Client Organization, Contractor's Regional Vice President General Manager, the County DHS Chief Information Officer ("**DHS CIO**"), County Project Director, or their designees, shall have a scheduled meeting, once per quarter. The DHS CIO or County Project Director shall prepare a written agenda for the meeting, to include specific topics to be discussed at the meeting, including background with regard to issues that have previously been raised with Contractor's personnel, and shall provide the agenda to Contractor no later than five (5) Business Days prior to the scheduled meeting. The meeting may occur in person or by telephone/video as agreed upon by the DHS CIO or County Project Director and Contractor's Executive Vice President Of Client Organization and Contractor's Regional Vice President General Manager. Notwithstanding the foregoing, more frequent meetings may occur in the event that the DHS CIO or County Project Director identifies emergent issues which require resolution prior to the next regularly scheduled quarterly meeting. Issues discussed at a meeting that are unresolved will be escalated by the Contractor immediately to its Chief Operating Officer ("**COO**"), and the COO will respond directly to the DHS CIO or County Project Manager within ten (10) Business Days.

31.2 VALUE AND ROI STUDY

Contractor shall provide, at no cost to County, a before, during, and after study of the EHR System/Contractor value proposition at County. County and Contractor will cooperate in the design of the study, which will have agreed objectives, work plans, metrics, and measurement methodologies for each phase of the study (e.g. before, during, and after implementation of the Licensed Software). County will cooperate with Contractor in this effort and will provide reasonable assistance to Contractor in providing data and staff time to facilitate measurement

of the agreed metrics. Such metrics, may include, among others, those relating to patient experience, physician experience, operational efficiency and clinical quality. All work papers and results of the study, whether favorable or not favorable will be provided to County. The results will not be published with County's name, demographic, or other information that could reasonably cause the subject of the study to be identified as County without County's prior written consent to the release of the specific study. County will not publish the results without providing Contractor a thirty (30) day period for non-binding review and comment on the publication.

32. MISCELLANEOUS

32.1 FORCE MAJEURE

(a) Neither Party shall be liable for such Party's failure to perform its obligations under and in accordance with this Agreement, if such failure arises out of fires, floods, epidemics, quarantine restrictions, other natural occurrences, strikes, lockouts (other than a lockout by such Party or any of such Party's subcontractors), freight embargoes, or other similar events to those described above, but in every such case the failure to perform must be totally beyond the control and without any fault or negligence of such Party (such events are referred to in this sub-paragraph as "**Force Majeure Events**").

(b) Notwithstanding the foregoing, a default by a subcontractor of Contractor shall not constitute a Force Majeure Event, unless such default arises out of causes beyond the control of both Contractor and such subcontractor, and without any fault or negligence of either of them. In such case, Contractor shall not be liable for failure to perform, unless the goods or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit Contractor to meet the required performance schedule. As used in this Subsection, the term "subcontractor" and "subcontractors" mean subcontractors at any tier.

(c) In the event Contractor's failure to perform arises out of a Force Majeure Event, Contractor agrees to obtain goods or services from other sources, if applicable, and to otherwise mitigate the damages and reduce the delay caused by such Force Majeure Event.

(d) In the event a Force Majeure Event continues for more than thirty (30) Business Days, County may terminate this Agreement effective upon providing written notice to Contractor. Notwithstanding the foregoing, a Force Majeure Event will not relieve Contractor of its obligations under Sections 19 (Confidentiality), 20 (Security), and 22 (Disaster Recovery/Business Continuity) or any Service Levels expressly identified in a Statement of Work.

32.2 UCITA; SELF-HELP REMEDIES

The Uniform Computer Information Transactions Act ("**UCITA**") shall not apply to this Agreement regardless of when and howsoever adopted, enacted and further amended under the laws of any jurisdiction whose laws may be deemed to apply. In the event that UCITA is adopted and enacted in California or any other jurisdiction whose laws may be deemed to apply

and, as a result of such adoption and enactment or any subsequent amendment thereto, the Parties are required to take any action to effectuate the result contemplated by this provision, including amending this Agreement, the Parties agree to take such action as may be reasonably required, including amending this Agreement accordingly. Contractor expressly waives any rights it may have under any applicable law to exercise any means of self-help, electronic or otherwise, with respect to any software provided hereunder, including any self-help remedies provided for under UCITA regardless of when and howsoever adopted, enacted or further amended under the laws of any jurisdiction whose laws may be deemed to apply.

32.3 NOTICES

(a) All notices or demands required or permitted to be given or made under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the Parties at the following addresses and delivered: (i) by hand with signed receipt; (ii) by first class registered or certified United States mail, postage prepaid; or (iii) by facsimile or electronic mail transmission followed within twenty-four (24) hours by a confirmation copy mailed by first-class registered or certified United States mail, postage prepaid. Notices shall be deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, or on the date of facsimile or electronic mail transmission if followed by timely confirmation mailing. Addresses may be changed by either Party by giving ten (10) days prior written notice thereof to the other Party.

(b) Director shall have the authority to issue all notices or demands which are required or permitted to be issued by County under this Agreement.

(c) All notices shall be sent by one of the methods specified above, to the following:

(i) To County, notices shall be sent to the attention of the County Project Manager, County Project Director and County Director of Contract Administration and Monitoring at the respective addresses specified in Exhibit X (County Key Personnel).

(ii) To Contractor, notices shall be sent to the attention of the Contractor Project Manager at the address specified in Exhibit J (Contractor Key Employees).

(d) Each Party may change the names of the people designated to receive notices pursuant to this Section 32.3 (Notices) by giving written notice of the change to the other Party, subject to County's right of Approval in accordance with Section 10.1 (Project Team).

32.4 INTERPRETATION

(a) All Exhibits, Statements of Work, Attachments, and Schedules that are referenced herein and appended hereto, or are signed by the Parties on or after the date of this Agreement and by their express terms are to be part of this Agreement, are hereby incorporated by reference. The Exhibits, Statements of Work, Attachments, and Schedules set forth in the Exhibit list above are attached hereto and incorporated herein.

(b) In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility, schedule, or the contents or description of any task, subtask, Deliverable, goods, service, or other Service, or otherwise, between or among any of the body of this Agreement (For purposes of determining conflicts between parts of this Agreement, Exhibit N (Additional Hosting Services Terms and Conditions) shall be deemed to be part of the body of this Agreement), Statements of Work, Exhibits, Attachments, and Schedules, such conflict or inconsistency shall be resolved by giving precedence first to the body of this Agreement, and then to the Statements of Work, Exhibits, Attachments, and Schedules according to the following descending priority:

(i) Exhibit G (Glossary);

(ii) Exhibit A (Statements of Work);

(iii) Exhibit E (Service Levels and Performance Standards);

(iv) Exhibit C (Fees; Contractor Professional Services Rates);

(v) Exhibit P (Form Statement of Work);

(vi) Exhibit W (Relevant Responses to County Requirements); and

(vii) All other Exhibits, Attachments and Schedules.

(c) When an industry standard or commonly referenced business process (such as HL7 protocols, SAS 70 Type II audits or ISO-17799 standards) referenced in this Agreement, is succeeded by a differently named or numbered standard or process, that successor standard or process is incorporated herein as if it were referenced by its new name or number in this Agreement. For example, references in this Agreement to SAS 70 shall be read as references to SSAE 16, upon its effective date and replacement of SAS 70.

32.5 ENTIRE AGREEMENT

This Agreement and the Statements of Work, Exhibits, Attachments, and Schedules to this Agreement, as to its subject matter, exclusively and completely states the rights, duties, and obligations of the Parties, and supersedes any and all prior and contemporaneous representations, letters, proposals, discussions, agreements, and understandings, whether written or oral, by or between the Parties. This Agreement may only be amended in a writing signed by both Parties in accordance with Section 13 (Changes to Agreement). The Parties, by their representatives signing below, agree with the terms of this Agreement. In particular, no shrink-wrap, click-wrap, or other terms and conditions or agreements ("**Additional Terms**") provided with any products or software hereunder shall be binding on County, even if use of such products and software requires an affirmative "acceptance" of those Additional Terms before access is permitted. All such Additional Terms shall be of no force or effect and shall be deemed rejected by County in their entirety.

32.6 WAIVERS

All waivers hereunder must be made in writing by a duly authorized representative of the Party against whom the waiver is to operate, and failure at any time to require the other Party's performance of any obligation under this Agreement shall not affect the right subsequently to require performance of that obligation. Any waiver, in whole or in part, of any provision of this Agreement will not be considered to be a waiver of any other provision.

32.7 GOVERNING LAW

This Agreement shall be governed by, and construed in accordance with, the laws of the State of California, without regard to its conflict of law provisions. Contractor agrees and consents to the exclusive jurisdiction of the courts of the State of California for all purposes regarding this Agreement and further agrees and consents that venue of any action brought hereunder shall be exclusively in the County of Los Angeles.

32.8 COMPLIANCE WITH APPLICABLE LAWS

(a) In the performance of this Agreement, Contractor shall comply with all applicable Federal, State and local laws, rules, regulations, ordinances, and all provisions required thereby to be included in this Agreement are hereby incorporated herein by reference.

(b) Contractor shall indemnify, defend, and hold harmless County, and its officers, employees, and agents, from and against any and all third-party claims, demands, damages, liabilities, losses, costs, and expenses, including, without limitation, defense costs and reasonable legal, accounting, and other expert, consulting, or professional fees, arising from, connected with, or related to any failure by Contractor, or its officers, employees, agents, or subcontractors, to comply with any such laws, rules, regulations, ordinances, as determined by County in its sole judgment. Any legal defense pursuant to Contractor's indemnification obligations under this Section 32.8 (Compliance with Applicable Laws) shall be conducted by Contractor and performed by counsel selected by Contractor. Notwithstanding the preceding sentence, County shall have the right to participate in any such defense at its sole cost and expense, except that in the event Contractor fails to provide County with a full and adequate defense, as determined by County in its sole judgment, County shall be entitled to retain its own counsel, including, without limitation, County Counsel, and reimbursement from Contractor for all such costs and expenses incurred by County in doing so. Neither Party shall have the right to enter into any settlement, agree to any injunction or other equitable relief, or make any admission, in each case, on behalf of the other Party without prior written approval.

32.9 REQUIRED CERTIFICATIONS

Contractor shall obtain and maintain in effect during the Term of this Agreement all licenses, permits, registrations, accreditations, and certificates required by all Federal, State, and local laws, ordinances, rules, and regulations, which are applicable to Contractor's Services under this Agreement. Contractor shall further ensure that all of its officers, employees, agents, and subcontractors who perform services hereunder, shall obtain and maintain in effect during the Term of this Agreement all licenses, permits, registrations, accreditations and certificates which are applicable to their performance hereunder. A copy of each such license, permit, registration, accreditation, and certificate required by all applicable Federal, State, and local

laws, ordinances, rules, and regulations shall be provided upon written request, in duplicate, to the County Project Director in accordance with Section 32.3 (Notices).

32.10 COMPLIANCE WITH CIVIL RIGHTS LAWS

Contractor hereby assures that it will comply with Subchapter VI of the Civil Rights Act of 1964, 42 U.S.C. Sections 2000(e)(1) through 2000(e)(17), to the end that no person shall, on the grounds of race, creed, color, sex, religion, ancestry, age, condition of physical handicap, marital status, political affiliation, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Agreement or under any project, program, or activity supported by this Agreement. Contractor shall comply with Exhibit S (Contractor's EEO Certification).

32.11 NONDISCRIMINATION AND AFFIRMATIVE ACTION

(a) Contractor certifies and agrees that all persons employed by it, its affiliates, subsidiaries, or holding companies are and shall be treated equally without regard to or because of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation, in compliance with all applicable Federal and State anti-discrimination laws and regulations.

(b) Contractor shall certify to, and comply with, the provisions of Exhibit S (Contractor's EEO Certification).

(c) Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation, in compliance with all applicable Federal and State anti-discrimination laws and regulations. Such action shall include, but is not limited to: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(d) Contractor certifies and agrees that it will deal with its subcontractors, bidders, and vendors without regard to or because of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation.

(e) Contractor certifies and agrees that it, and its affiliates, subsidiaries, and holding companies shall comply with all applicable Federal and State laws and regulations to the end that no person shall, on the grounds of race, color, religion, ancestry, national origin, sex, age, physical or mental disability, marital status, or political affiliation, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Agreement or under any project, program, or activity supported by this Agreement.

(f) Contractor shall allow County representatives access to the Contractor's applicable employment records during regular business hours to verify compliance with the provisions of this Section 32.11 (Nondiscrimination and Affirmative Action) when so

requested by the County. County shall provide reasonable advanced notice of the timing and need to review Contractor's employment records.

(g) If the County finds that any provisions of this Section 32.11 (Nondiscrimination and Affirmative Action) have been violated, such violation shall constitute a material breach of this Agreement. A determination by the California Fair Employment and Housing Commission or the Federal Equal Employment Opportunity Commission that the Contractor has violated Federal or State anti-discrimination laws or regulations shall constitute a finding by the County that the Contractor has violated the anti-discrimination provisions of this Agreement.

(h) The Parties agree that in the event the Contractor violates any of the anti-discrimination provisions of this Agreement, the County shall, at its sole option, be entitled to the sum of Five Hundred Dollars ($500) for each such violation pursuant to California Civil Code Section 1671 as liquidated damages in lieu of terminating or suspending this Agreement.

32.12 CONSTRUCTION

All captions and paragraph and Section headings used in this Agreement are for reference purposes only and are not part of this Agreement, and shall not be used in construing this Agreement. Neither this Agreement nor any Statement of Work, Exhibit, Attachment, or Schedule will be construed in favor or against either Party by reason of the authorship of any provisions hereof.

32.13 SEVERABILITY

If any provision of this Agreement or the application thereof to any person or circumstance is held invalid, the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected thereby.

32.14 AGREEMENT DRAFTED BY ALL PARTIES

This Agreement is the result of arm's length negotiations between the Parties. Consequently, each Party has had the opportunity to receive advice from independent counsel of its own choosing. This Agreement shall be construed to have been drafted by all Parties such that any ambiguities in this Agreement shall not be construed against either Party.

32.15 COUNTERPARTS

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and will become effective and binding upon the Parties as of the Effective Date at such time as all the signatories hereto have signed a counterpart of this Agreement.

32.16 DAYS

Unless expressly provided otherwise, all references to "days" refer to calendar days.

32.17 ASSIGNMENT AND DELEGATION

32.17.1 ASSIGNMENT BY CONTRACTOR

(a) Contractor shall not assign its rights or delegate its duties under this Agreement, or both, whether in whole or in part, without the prior written consent of County, in its discretion, and any attempted assignment or delegation without such consent shall be null and void. For purposes of this Section 32.17.1 (Assignment by Contractor), County consent shall require a written amendment to the Agreement, which is formally approved and executed by the Parties. Any payments by the County to any approved delegate or assignee on any claim under this Agreement shall be deductible, at County's sole discretion, against the claims, which the Contractor may have against the County.

(b) Any assumption, assignment, delegation, or takeover of any of the Contractor's duties, responsibilities, obligations, or performance of same by any entity other than the Contractor, whether through assignment, subcontract, delegation, merger, buyout, Change of Control, or any other mechanism, with or without consideration for any reason whatsoever without County's express prior written Approval, shall be a material breach of this Agreement which may result in the termination of this Agreement. Notwithstanding the foregoing, shareholders or other equity holders of Contractor may transfer, sell, exchange, assign, or divest themselves of any interest they may have in Contractor without breaching this Section 32.17.1 (Assignment by Contractor) provided such sale, transfer, exchange, assignment, or divestment does not result in a Change of Control.

In the event of a termination under this Section 37.17.1 (Assignment by Contractor), County shall be entitled to pursue the same remedies against Contractor as it could pursue in the event of default by Contractor. County must deliver notice of termination pursuant to this Section 32.17.1(b) (Assignment by Contractor) within one-hundred and twenty (120) calendar days of, the later of (i) County's knowledge, or (ii) public disclosure, of any event above requiring County's express prior written Approval. For purposes of this Section, "Change of Control" shall mean a direct or indirect change (e.g., whether caused by Contractor, or its shareholder(s) or other equity holders of Contractor), of the power to direct or cause the direction of the management and policies of Contractor, whether through ownership of assets or voting securities, governing board representation, contract, or otherwise. In the event there is a Change of Control without County's express prior written Approval under this Section 32.17.1(b) (Assignment by Contractor), within thirty (30) calendar days of County's knowledge of or the public disclosure of such Change of Control event, Contractor and County will meet to discuss County's concerns regarding the Change of Control and develop solutions and adequate assurances in an effort to resolve County's concerns. In the event County Approves the solutions and adequate assurances, an Amendment, if necessary, implementing such solutions and adequate assurances will be submitted to the Board. The approval of the

Amendment by the Board will be deemed a cure of Contractor's material breach under this Section 32.17.1(b) (Assignment by Contractor). Contractor's failure to obtain County's express prior written Approval under this Section 32.17.1(b) (Assignment by Contractor) shall not be deemed a material breach if the failure to obtain Approval seven (7) or more years after the Effective Date of this Agreement.

32.17.2 ASSIGNMENT BY COUNTY

This Agreement may be assigned in whole or in part by County, without the further consent of Contractor, to a party which is not a competitor of Contractor and which agrees in writing to perform County's obligations under this Agreement.

32.18 COOPERATION IN REGULATORY COMPLIANCE

Contractor shall reasonably cooperate with County with regard to regulatory compliance matters relating to the Licensed Software, Services, and/or Deliverables. Such cooperation shall include, but is not limited to, the following: (a) responding in good faith to reasonable requests to change or modify this Agreement as set forth in Section 13 (Changes to Agreement) as it relates to County's regulatory compliance; and (b) to the extent reasonably practicable, providing documentation, including system audit information and incident response reports, to validate ongoing compliance by Contractor with its security and confidentiality obligations hereunder.

32.19 TERMINOLOGY

All personal pronouns used herein, whether used in the feminine, masculine, or neuter gender, shall include all other genders, and the singular shall include the plural and vice versa. Unless otherwise expressly stated, the words "herein," "hereof," and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section, Subsection, or other subpart. The words "include," "includes," "included," "including," "without limitation," or the phrase "e.g." shall not be construed as terms of limitation and shall, in all instances, be interpreted as meaning "including, but not limited to."

32.20 ELECTRONIC SIGNATURES AND FACSIMILES - BINDING

Except for the Parties' initial signatures to this Agreement, which must be provided in "original" form and not by facsimile or other electronic form, this Agreement and associated Statement(s) of Work and related documents may be accepted in electronic form (e.g., by an electronic or digital signature or other means of demonstrating assent) and Contractor's acceptance will be deemed binding between the Parties. Contractor acknowledges and agrees it will not contest the validity or enforceability of this Agreement and associated Statement(s) of Work and related documents, including under any applicable statute of frauds, because they were accepted and/or signed in electronic form. Contractor further acknowledges and agrees that it will not contest the validity or enforceability of a signed facsimile copy of this Agreement and associated Statement(s) of Work and related documents on the basis that it lacks an original handwritten signature. Facsimile signatures shall be considered valid signatures as of the date hereof. Computer maintained records of a Party when produced in hard copy form shall constitute

business records and shall have the same validity as any other generally recognized business records.

32.21 PROHIBITION AGAINST INDUCEMENT OR PERSUASION

Notwithstanding the above, the Contractor and the County agree that, during the Term of this Agreement and for a period of one (1) year thereafter, neither Party shall in any way intentionally induce or persuade any employee of one Party to become an employee or agent of the other Party. No bar exists against any hiring action initiated through non-targeted solicitation in the ordinary course of business, which would include a public announcement.

32.22 CONTRACTOR PERSONNEL INJURIES

In the event Contractor Personnel are injured or hurt while rendering the Services, whether onsite at County or otherwise, Contractor's workers compensation coverage shall be the exclusive remedy for the Contractor Personnel as it relates to County.

32.23 RECYCLED BOND PAPER

Consistent with the Board of Supervisors' policy to reduce the amount of solid waste deposited at the County landfills, the Contractor agrees to use recycled-content paper to the maximum extent possible on this Agreement.

32.24 NON-EXCLUSIVITY

Nothing herein is intended nor shall be construed as creating any exclusive arrangement with the Contractor. This Agreement shall not restrict County from acquiring similar, equal, or like goods and/or services from other entities or sources.

32.25 BUDGET REDUCTIONS

In the event that the County's Board of Supervisors adopts, in any fiscal year, a County Budget which provides for reductions in the salaries and benefits paid to the majority of County employees and imposes similar reductions with respect to County contracts, the County reserves the right to reduce its payment obligation under this Agreement correspondingly for that fiscal year and any subsequent fiscal year during the Term of this Agreement (including any extensions), and the services to be provided by the Contractor under this Agreement shall also be reduced correspondingly. The County's notice to the Contractor regarding said reduction in payment obligation shall be provided within thirty (30) calendar days of the Board's Approval of such actions. Except as set forth in the preceding sentence, the Contractor shall continue to provide all of the services set forth in this Agreement, as adjusted per Section 13.4 (Amendments).

32.26 PUBLIC RECORDS ACT

(a) Any documents submitted by the Contractor; all information obtained in connection with the County's right to audit and inspect the Contractor's documents, books, and accounting records pursuant to Section 15.10 (Record Retention and Inspection/Audit

Settlement) of this Agreement; as well as those documents which were required to be submitted in response to the RFP used in the solicitation process for this Agreement become a matter of public record and shall be regarded as public records. Exceptions will be those elements in the California Government Code Section 6250 et seq. ("**Public Records Act**") and which are marked "trade secret", "confidential", or "proprietary". The County shall not in any way be liable or responsible for the disclosure of any such records including, without limitation, those so marked, if disclosure is required by law, or by an order issued by a court of competent jurisdiction.

(b) In the event the County is required to defend an action on a Public Records Act request for any of the aforementioned documents, information, books, records, and/or contents of a proposal marked "trade secret", "confidential", or "proprietary", the Contractor agrees to defend and indemnify the County from all costs and expenses, including reasonable attorney's fees, in action or liability arising under the Public Records Act.

32.27 CONFLICT OF INTEREST

(a) No County employee whose position with the County enables such employee to influence the award of this Agreement or any competing contract, and no spouse or economic dependent of such employee, shall be employed in any capacity by the Contractor or have any other direct or indirect financial interest in this Agreement. No officer or employee of the Contractor who may financially benefit from the performance of work hereunder shall in any way participate in the County's Approval, or ongoing evaluation, of such work, or in any way attempt to unlawfully influence the County's Approval or ongoing evaluation of such work.

(b) Contractor shall comply with all conflict of interest laws, ordinances, and regulations now in effect or hereafter to be enacted during the Term of this Agreement. Contractor warrants that it is not now aware of any facts that create a conflict of interest. If the Contractor hereafter becomes aware of any facts that might reasonably be expected to create a conflict of interest, it shall immediately make full written disclosure of such facts to the County. Full written disclosure shall include, but is not limited to, identification of all persons implicated and a complete description of all relevant circumstances. Failure to comply with the provisions of this Section 32.27 (Conflict of Interest) shall be a material breach of this Agreement.

32.28 CONTRACTOR RESPONSIBILITY AND DEBARMENT

32.28.1 RESPONSIBLE CONTRACTOR

A responsible contractor is a contractor who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform the contract. It is the County's policy to conduct business only with responsible contractors.

32.28.2 CHAPTER 2.202 OF THE COUNTY CODE

Contractor is hereby notified that, in accordance with Chapter 2.202 of the County Code, if the County acquires information concerning the performance of the Contractor on this or other contracts which indicates that the Contractor is not responsible, the County may, in addition to other remedies provided in the Agreement, debar the Contractor from bidding or proposing on, or being awarded, and/or performing work on County contracts for a specified period of time, which generally will not exceed five (5) years but may exceed five (5) years or be permanent if warranted by the circumstances, and terminate any or all existing contracts the Contractor may have with the County.

32.28.3 NON-RESPONSIBLE CONTRACTOR

The County may debar a Contractor if the Board of Supervisors finds, in its discretion, that the Contractor has done any of the following: (a) violated a term of a contract with the County or a nonprofit corporation created by the County; (b) committed an act or omission which negatively reflects on the Contractor's quality, fitness, or capacity to perform a contract with the County, any other public entity, or a nonprofit corporation created by the County, or engaged in a pattern or practice which negatively reflects on same; (c) committed an act or offense which indicates a lack of business integrity or business honesty; or (d) made or submitted a false claim against the County or any other public entity.

32.28.4 CONTRACTOR HEARING BOARD

(a) If there is evidence that the Contractor may be subject to debarment, the Department will notify the Contractor in writing of the evidence which is the basis for the proposed debarment and will advise the Contractor of the scheduled date for a debarment hearing before the Contractor Hearing Board.

(b) The Contractor Hearing Board will conduct a hearing where evidence on the proposed debarment is presented. Contractor and/or the Contractor's representative shall be given an opportunity to submit evidence at that hearing. After the hearing, the Contractor Hearing Board shall prepare a tentative proposed decision, which shall contain a recommendation regarding whether the Contractor should be debarred, and, if so, the appropriate length of time of the debarment. Contractor and the Department shall be provided an opportunity to object to the tentative proposed decision prior to its presentation to the Board of Supervisors.

(c) After consideration of any objections, or if no objections are submitted, a record of the hearing, the proposed decision, and any other recommendation of the Contractor Hearing Board shall be presented to the Board of Supervisors. The Board of Supervisors shall have the right to modify, deny, or adopt the proposed decision and recommendation of the Contractor Hearing Board.

(d) If a Contractor has been debarred for a period longer than five (5) years, that Contractor may after the debarment has been in effect for at least five (5) years, submit a written request for review of the debarment determination to reduce the period of debarment or terminate the debarment. The County may, in its discretion, reduce the period of debarment or terminate the debarment if it finds that the Contractor has adequately demonstrated one or more of the following: (i) elimination of the grounds for which the debarment was imposed; (ii) a bona fide change in ownership or management; (iii) material evidence discovered after debarment was imposed; or (iv) any other reason that is in the best interests of the County.

(e) The Contractor Hearing Board will consider a request for review of a debarment determination only where (i) the Contractor has been debarred for a period longer than five (5) years; (ii) the debarment has been in effect for at least five (5) years; and (iii) the request is in writing, states one or more of the grounds for reduction of the debarment period or termination of the debarment, and includes supporting documentation. Upon receiving an appropriate request, the Contractor Hearing Board will provide notice of the hearing on the request. At the hearing, the Contractor Hearing Board shall conduct a hearing where evidence on the proposed reduction of debarment period or termination of debarment is presented. This hearing shall be conducted and the request for review decided by the Contractor Hearing Board pursuant to the same procedures as for a debarment hearing.

(f) The Contractor Hearing Board's proposed decision shall contain a recommendation on the request to reduce the period of debarment or terminate the debarment. The Contractor Hearing Board shall present its proposed decision and recommendation to the Board of Supervisors. The Board of Supervisors shall have the right to modify, deny, or adopt the proposed decision and recommendation of the Contractor Hearing Board.

32.28.5 SUBCONTRACTORS OF CONTRACTOR

These terms shall also apply to subcontractors of County contractors.

32.29 COUNTY'S QUALITY ASSURANCE PLAN

The County or its agent will evaluate the Contractor's performance under this Agreement on not less than an annual basis. Such evaluation will include assessing the Contractor's compliance with all Agreement terms and conditions and performance standards. Contractor deficiencies which the County determines are severe or continuing and that may place performance of the Agreement in jeopardy if not corrected will be reported to the Board of Supervisors.

The report will include improvement/corrective action measures taken by the County and the Contractor.

32.30 EMPLOYMENT ELIGIBILITY VERIFICATION

(a) Contractor warrants that it fully complies with all Federal and State statutes and regulations regarding the employment of aliens and others and that all its employees performing work under this Agreement meet the citizenship or alien status requirements set forth in Federal and State statutes and regulations. Contractor shall obtain, from all employees performing work hereunder, all verification and other documentation of employment eligibility status required by Federal and State statutes and regulations including, but not limited to, the Immigration Reform and Control Act of 1986, (P.L. 99-603), as they currently exist and as they may be hereafter amended. Contractor shall retain all such documentation for all covered employees for the period prescribed by law.

(b) Contractor shall indemnify, defend, and hold harmless, the County, and its agents, officers, and employees from employer sanctions and any other liability which may be assessed against the Contractor or the County or both in connection with any alleged violation of any Federal or State statutes or regulations pertaining to the eligibility for employment of any persons performing work under this Agreement.

32.31 COMPLIANCE WITH THE COUNTY'S JURY SERVICE PROGRAM

32.31.1 JURY SERVICE PROGRAM

This Agreement is subject to the provisions of the County's ordinance entitled Contractor Employee Jury Service ("**Jury Service Program**") as codified in Sections 2.203.010 through 2.203.090 of the Los Angeles County Code, a copy of which is attached as Exhibit T.2 (Jury Service Ordinance) and incorporated by reference into and made a part of this Agreement.

32.31.2 WRITTEN EMPLOYEE JURY SERVICE POLICY.

(a) Unless the Contractor has demonstrated to the County's satisfaction either that the Contractor is not a "Contractor" as defined under the Jury Service Program (Section 2.203.020 of the County Code) or that the Contractor qualifies for an exception to the Jury Service Program (Section 2.203.070 of the County Code), the Contractor shall have and adhere to a written policy that provides that its Employees shall receive from the Contractor, on an annual basis, no less than five (5) days of regular pay for actual jury service. The policy may provide that Employees deposit any fees received for such jury service with the Contractor or that the Contractor deduct from the Employee's regular pay the fees received for jury service.

(b) For purposes of this Section 32.31.2 (Written Employee Jury Service Policy) only, "**Contractor**" means a person, partnership, corporation or other entity which has a contract with the County or a subcontract with a County Contractor and has received or will receive an aggregate sum of Fifty Thousand Dollars ($50,000) or more in any twelve (12)-month period under one or more County contracts or subcontracts. "**Employee**" means any

California resident who is a full-time employee of the Contractor. "**Full-time**" means forty (40) hours or more worked per week, or a lesser number of hours if: (i) the lesser number is a recognized industry standard as determined by the County, or (ii) Contractor has a long-standing practice that defines the lesser number of hours as full-time. Full-time employees providing short-term, temporary services of ninety (90) days or less within a twelve (12)-month period are not considered full-time for purposes of the Jury Service Program. If the Contractor uses any subcontractor to perform services for the County under the Agreement, the subcontractor shall also be subject to the provisions of this Section 32.31.2(b) (Written Employee Jury Service Policy). The provisions of this Section 32.31.2(b) (Written Employee Jury Service Policy) shall be inserted into any such subcontract agreement and a copy of the Jury Service Program shall be attached to this Agreement.

(c) If the Contractor is not required to comply with the Jury Service Program when the Agreement commences, the Contractor shall have a continuing obligation to review the applicability of its "exception status" from the Jury Service Program, and the Contractor shall immediately notify the County if the Contractor at any time either comes within the Jury Service Program's definition of "Contractor" or if the Contractor no longer qualifies for an exception to the Jury Service Program. In either event, the Contractor shall immediately implement a written policy consistent with the Jury Service Program. The County may also require, at any time during the Agreement and at its sole discretion, that the Contractor demonstrate, to the County's satisfaction that the Contractor either continues to remain outside of the Jury Service Program's definition of "Contractor" and/or that the Contractor continues to qualify for an exception to the Program.

(d) Contractor's violation of this sub-paragraph of the Agreement may constitute a material breach of the Agreement. In the event of such material breach, County may, in its sole discretion, terminate the Agreement and/or bar the Contractor from the award of future County contracts for a period of time consistent with the seriousness of the breach.

32.32 CONSIDERATION OF HIRING COUNTY EMPLOYEES TARGETED FOR LAYOFF/OR RE-EMPLOYMENT LIST

Should the Contractor require additional or replacement personnel after the Effective Date of this Agreement to perform the services set forth herein, the Contractor shall give first consideration for such employment openings to qualified, permanent County employees who are targeted for layoff or qualified, former County employees who are on a re-employment list during the life of this Agreement.

32.33 CONSIDERATION OF HIRING GAIN/GROW PROGRAM PARTICIPANTS

(a) Should the Contractor require additional or replacement personnel after the Effective Date of this Agreement, the Contractor shall give consideration for any such

employment openings to participants in the County's Department of Public Social Services Greater Avenues for Independence ("**GAIN**") Program or General Relief Opportunity for Work ("**GROW**") Program who meet the Contractor's minimum qualifications for the open position. For this purpose, consideration shall mean that the Contractor will interview qualified candidates. The County will refer GAIN/GROW participants by job category to the Contractor.

(b) In the event that both laid-off County employees and GAIN/GROW participants are available for hiring, County employees shall be given first priority.

32.34 CONTRACTOR'S WARRANTY OF ADHERENCE TO COUNTY'S CHILD SUPPORT COMPLIANCE PROGRAM

(a) Contractor acknowledges that the County has established a goal of ensuring that all individuals who benefit financially from the County through contract are in compliance with their court-ordered child, family, and spousal support obligations in order to mitigate the economic burden otherwise imposed upon the County and its taxpayers.

(b) As required by the County's Child Support Compliance Program (County Code Chapter 2.200) and without limiting the Contractor's duty under this Agreement to comply with all applicable provisions of law, the Contractor warrants that it is now in compliance and shall during the Term of this Agreement maintain in compliance with employment and wage reporting requirements as required by the Federal Social Security Act (42 USC Section 653a) and California Unemployment Insurance Code Section 1088.5, and shall implement all lawfully served Wage and Earnings Withholding Orders or Child Support Services Department Notices of Wage and Earnings Assignment for Child, Family, or Spousal Support, pursuant to California Code of Civil Procedure Section 706.031 and California Family Code Section 5246(b).

32.35 SAFELY SURRENDERED BABY LAW

32.35.1 CONTRACTOR'S ACKNOWLEDGMENT OF COUNTY'S COMMITMENT TO THE SAFELY SURRENDERED BABY LAW

Contractor acknowledges that the County places a high priority on the implementation of the Safely Surrendered Baby Law. Contractor understands that it is the County's policy to encourage all County contractors to voluntarily post the County's "Safely Surrendered Baby Law" poster in a prominent position at the Contractor's place of business. Contractor will also encourage its subcontractors, if any, to post this poster in a prominent position in the subcontractor's place of business. The County's Department of Children and Family Services will supply the Contractor with the poster to be used. Information on how to receive the poster can be found on the Internet at www.babysafela.org.

32.35.2 NOTICE TO EMPLOYEES REGARDING THE SAFELY SURRENDERED BABY LAW

Contractor shall notify and provide to its employees, and shall require each subcontractor to notify and provide to its employees, a fact sheet regarding the

Safely Surrendered Baby Law, its implementation in Los Angeles County, and where and how to safely surrender a baby. The fact sheet is set forth in Exhibit T.1 (Safely Surrendered Baby Law) of this Contract and is also available on the Internet at www.babysafela.org for printing purposes.

32.36 FEDERAL EARNED INCOME CREDIT

Contractor shall notify its employees, and shall require each subcontractor to notify its employees, that they may be eligible for the Federal Earned Income Credit under the federal income tax laws. Such notice shall be provided in accordance with the requirements set forth in Internal Revenue Service Notice No. 1015 (attached as Exhibit T.3 (IRS Notice 1015)).

32.37 DEFAULTED PROPERTY TAX REDUCTION PROGRAM

32.37.1 CONTRACTOR'S WARRANTY OF COMPLIANCE WITH COUNTY'S DEFAULTED PROPERTY TAX REDUCTION PROGRAM

Contractor acknowledges that County has established a goal of ensuring that all individuals and businesses who benefit financially from County through contract are current in paying their property tax obligations (secured and unsecured roll) in order to mitigate the economic burden otherwise imposed upon County and its taxpayers.

Unless Contractor qualifies for an exemption or exclusion, Contractor warrants and certifies that to the best of its knowledge it is now in compliance, and during the Term of this Agreement will maintain compliance, with Los Angeles County Code Chapter 2.206.

32.37.2 TERMINATION FOR BREACH OF WARRANTY TO MAINTAIN COMPLIANCE WITH COUNTY'S DEFAULTED PROPERTY TAX REDUCTION PROGRAM

Failure of Contractor to maintain compliance with the requirements set forth in Section 32.37.1 (Contractor's Warranty of Compliance with County's Defaulted Property Tax Reduction Program) shall constitute default under this Agreement. Without limiting the rights and remedies available to County under any other provision of this Agreement, failure of Contractor to cure such default within ten (10) days of notice shall be grounds upon which County may terminate this Agreement and/or pursue debarment of Contractor pursuant to County Code Chapter 2.206.

32.38 RESTRICTIONS ON LOBBYING

32.38.1 FEDERAL FUNDS PROJECT

If any Federal funds are to be used to pay for any of Contractor's Services under this Agreement, Contractor shall fully comply with all certification and disclosure requirements prescribed by Section 319 of Public law 101-121 (31 U.S.C. Section 1352) and any implementing regulations, and shall ensure that each of its

subcontractors receiving funds provided under this Agreement also fully complies with all such certification and disclosure requirements.

32.38.2 LOBBYIST ORDINANCE

Contractor, and each County lobbyist or County lobbying firm as defined in County Code Section 2.160.010 retained by the Contractor, shall fully comply with the County's Lobbyist Ordinance, County Code Chapter 2.160. Failure on the part of the Contractor or any County lobbyist or County lobbying firm retained by the Contractor to fully comply with the County's Lobbyist Ordinance shall constitute a material breach of this Agreement, upon which the County may in its sole discretion, immediately terminate or suspend this Agreement at County's option, either for material breach under Section 29.2 (Termination for Material Breach) of this Agreement or for convenience under Section 29.6 (Termination for Convenience) of this Agreement.

32.39 STAFF PERFORMANCE WHILE UNDER INFLUENCE

Contractor shall use reasonable efforts to ensure that no employee of Contractor shall perform services hereunder while under the influence of any alcoholic beverage, medication, narcotic, or other substance, which might impair his/her physical or mental performance.

32.40 CONTRACTOR PERFORMANCE DURING CIVIL UNREST AND DISASTER

Contractor recognizes that County provides services essential to the residents of the communities it serves, and that these services are of particular importance at the time of a riot, insurrection, civil unrest, natural disaster, or similar event. Notwithstanding any other provision of this Agreement, including Section 32.1 (Force Majeure), full performance by Contractor during any riot, insurrection, civil unrest, natural disaster, or similar event is not excused if such performance remains physically possible without related danger to Contractor's or subcontractors' employees and suppliers. During any such event in which the health or safety of any of Contractor's staff members would be endangered by performing their services on-site, such staff members may perform any or all of their services remotely.

32.41 HEALTHE INTENT SERVICES

County may use Contractor's Healthe Intent Service. "**Healthe Intent Services**" means the Contractor's St. John Sepsis agent (CE-10300-PKG) and Healthe Intent: Chart Search (CE-10200).

County understands this Service is provided by Contractor at no fee and the Healthe Intent Service is not required to use the EHR System in accordance with the Agreement. Notwithstanding anything to the contrary in this Agreement, the Healthe Intent Service is (1) not subject to the limitation of liability in Section 24 (Limitation of Liability and Step Down Limitation of Liability Amount) of this Agreement; and instead is subject to the limitation of liability set forth in this Section 32.41 (Healthe Intent Services), (2) Contractor's indemnification obligations in the Agreement shall not apply to the Healthe Intent Services, (3) the Resolution Time Service Level and Response Time Service Level provided in the Agreement are not applicable as to Healthe Intent Services support, and (4) Contractor warrants only that the Healthe Intent

Services will perform in accordance with applicable laws and regulations and in a professional, workmanlike manner in accordance with the applicable Service description.

While the Healthe Intent Services have been developed and reviewed by Contractor based upon published data and the experiences of qualified professionals whenever possible, medical information changes rapidly and, therefore, some of the medical information utilized in the Healthe Intent Services may be out of date. County acknowledges and agrees that the Healthe Intent Services provided by Contractor are information management tools only many of which contemplate and require the involvement of professional medical personnel. In connection with its use of the Healthe Intent Service, County also acknowledges the Healthe Intent Service is not intended to be a substitute for the advice and professional judgment or other professional medical personnel and County will advise its personnel that use of the Healthe Service is not a substitute for, and does not affect the obligation of County's personnel to exercise, their own independent judgment in the delivery of medical care. County is responsible for credentialing all Users that use the Healthe Intent Services and determining the correct privileges for each User. County acknowledges and agrees that physicians and other professional medical personnel will be advised not to delay providing treatment, or make a treatment decision, based solely upon information provided through the Healthe Intent Services. County further acknowledges and agrees that Contractor has not represented its Healthe Intent Services as having the ability to diagnose disease, prescribe treatment, or perform any other tasks that constitute the practice of medicine or of other professional or academic disciplines.

As to the Healthe Intent Service only and not as to no other Service or element of this Agreement, NEITHER PARTY WILL BE LIABLE FOR LOST REVENUES OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, OR PUNITIVE DAMAGES, EVEN IF THE PARTY KNEW OR SHOULD HAVE KNOWN THAT SUCH DAMAGES WERE POSSIBLE AND EVEN IF DIRECT DAMAGES DO NOT SATISFY A REMEDY. Contractor's aggregate liability for all claims whatsoever arising solely from the Healthe Intent Service is One-Hundred Thousand Dollars ($100,000). This limitation of liability does not apply to breaches of the Business Associate Agreement.

THE HEALTHE INTENT SERVICES WARRANTY PROVIDED IN THIS SECTION IS IN LIEU OF, AND CONTRACTOR HEREBY EXPRESSLY DISCLAIMS, ALL OTHER WARRANTIES, BOTH EXPRESS AND IMPLIED. SPECIFICALLY, AND WITHOUT LIMITATION, CONTRACTOR DOES NOT WARRANT THAT THE HEALTHE INTENT SERVICES WILL BE ERROR-FREE OR UNINTERRUPTED, THAT ANY ALERTS OR OTHER INFORMATION PROVIDED THROUGH THE HEALTHE INTENT SERVICE HAVE THE ABILITY TO SAVE PATIENT LIVES, OR THAT ANY DEFECTS WILL BE CORRECTED. CONTENT IS DELIVERED ON AN AS-IS AND AS-AVAILABLE BASIS AND SUBJECT TO TIME DELAYS. THERE SHALL BE NO IMPLIED WARRANTIES OF ACCURACY, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF PROPRIETARY RIGHTS OR ANY OTHER WARRANTY AS MAY OTHERWISE BE APPLICABLE TO THE HEALTHE INTENT SERVICES.

Contractor may use the County Data in compliance with the provisions of Sections 19 (Confidentiality) and 20 (Security) of this Agreement and in a manner that is consistent with HIPAA and California state law (California Civil Code Section 56.10), in connection with Healthe Intent Services including performance of the Healthe Intent Services, analysis of the Healthe Intent Services, and improvements to the Healthe Intent Services. For purposes of this section, County Data shall mean all data that is collected, stored, or generated through the use of the Healthe Intent Services. Contractor is not responsible for County's actions required to

implement the County's security and privacy policies with respect to use by County and/or its Users of the Healthe Intent Services.

County will terminate unauthorized use of the Healthe Intent Services of which it is aware of and has validated. In an effort to assist Contractor in its efforts to secure the Healthe Intent Services, County will provide generalized information regarding an unauthorized access event to Contractor. For purposes of intellectual property protection, Healthe Intent Services shall be treated as Licensed Software under Sections 3.1.1 (Scope of License), 3.1.2 (License Restrictions) and Work Product under Section 18.2 (Ownership) of the Agreement.

Contractor and County will cooperate to implement the Healthe Intent Services and Contractor's efforts in that regard will be included in the Services.

[Signature Page Follows]

IN WITNESS WHEREOF, Contractor has executed this Agreement, or caused it to be duly executed and the County, by order of its Board has caused this Agreement to be executed on its behalf by the Chair of said Board and attested by the Executive Officer-Clerk of the Board thereof, the Effective Date.

COUNTY OF LOS ANGELES ("County")

By: _____

MITCHELL H. KATZ, M.D.,
DIRECTOR, HEALTH SERVICES

CERNER CORPORATION ("Contractor")

By: _____

Name: _____

Title: _____

(AFFIX CORPORATE SEAL HERE)

APPROVED AS TO FORM:

JOHN F. KRATTLI
COUNTY COUNSEL

By: _____

VICTORIA MANSOURIAN
SENIOR DEPUTY COUNTY COUNSEL

By: _____

SHARON A. REICHMAN
PRINCIPAL DEPUTY COUNTY COUNSEL

Exhibit A (Statements of Work)

to the

Electronic Health Records System and Services Agreement

EXHIBIT A

STATEMENTS OF WORK

The following Exhibits are attached to this Exhibit A (Statements of Work) and are hereby incorporated by reference:

A.1	Overall Project Management, Planning, Coordination and Integration Statement of Work
A.2	Project Initiation Statement of Work
A.3	EHR Architecture and Hosting Services Statement of Work
A.4	Registration and EMPI Statement of Work
A.5	Charge Services Statement of Work
A.6	Scheduling Statement of Work
A.7	Clinical Documentation and Results Statement of Work
A.8	Order Management, Computerized Provider Order Entry (CPOE) and Decision Support Statement of Work
A.9	Radiology Statement of Work
A.10	Laboratory Statement of Work
A.11	Pharmacy and Medication Management Statement of Work
A.12	Operating Room and Anesthesiology Statement of Work
A.13	Intensive Care Unit Statement of Work
A.14	Emergency Department Statement of Work
A.15	Rehabilitation Statement of Work
A.16	Medical Records Statement of Work
A.17	Clinical Data Repository and Reporting Statement of Work
A.18	Data Conversion Statement of Work
A.19	Security Statement of Work
A.20	Interfaces Statement of Work
A.21	EHR System Testing Statement of Work
A.22	Training and Knowledge Transfer Statement of Work
A.23	Deployment Statement of Work
A.24	Maintenance and Operations Statement of Work
A.25	Project Control Document
A.25.1	Project Work Plan
A.25.2	Project Staffing and Resource Management Plan
A.25.3	Error Management Plan
A.25.4	Project Communications Strategy
A.25.5	Risk Management Plan
A.25.6	Configuration and Technology Change Management Plan
A.25.7	Issue Management Plan
A.25.8	Project Change Management Plan
A.25.9	Quality Management Plan

A.25.10 Deliverables Management Plan
A.25.11 Procedures for Status Meetings/Reporting
A.26 Licensed Software Requirements
A.27 Acceptance Certificate

Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work)

to the

Electronic Health Records System and Services Agreement

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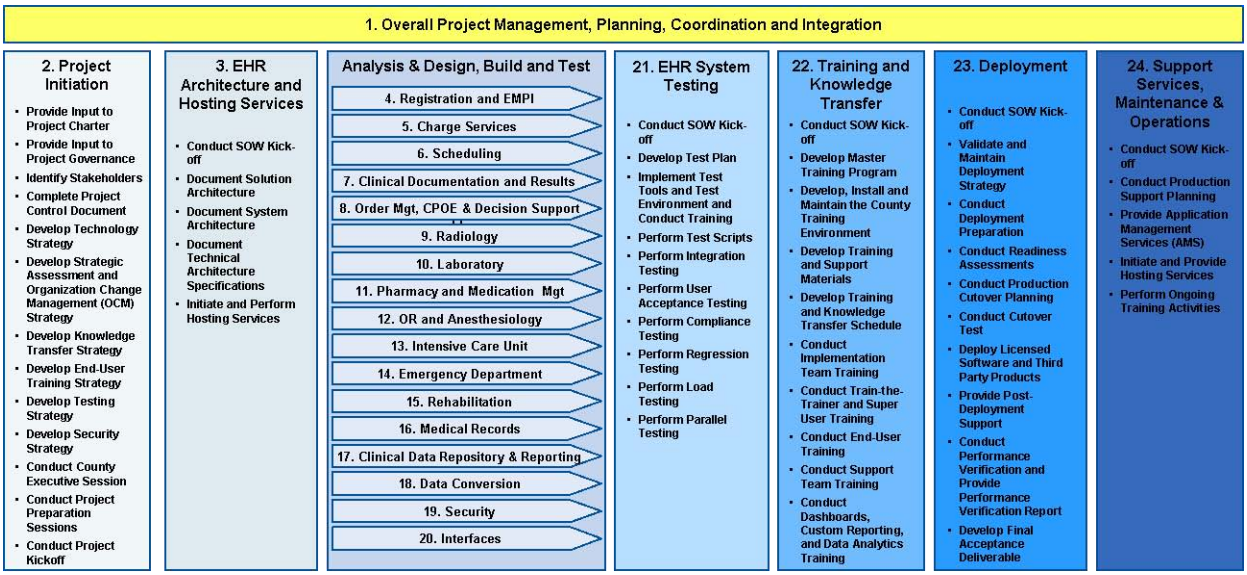
1. Introduction

This Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the all the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work). The completion of any phase in a period of time shorter or longer that that specified below shall not increase the Contract Sum.

This is Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide the overall project management, planning, coordination and task integration framework which will be used to manage all the activities for the EHR System implementation.

3. SOW Summary

3.1 Overview

This SOW addresses all the Project administration and Project management activities to ensure that Contractor can deliver and manage the Services for the Project in accordance with the Project Control Document.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. As part of this SOW, Deliverables are created which are used in all SOWs.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) will begin upon the Effective Date of the Agreement. This SOW is scheduled to be completed at the conclusion of the Project upon the Acceptance by the County Project Director of the Deliverables in this Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for tasks and sub-tasks will be developed as part of Project Control Document.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of Deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Project Manager Responsibilities

Contractor will designate a Contractor Project Manager to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Project Manager's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the Project Work Plan which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Overall Project Management, Planning, Coordination and Integration SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Project Manager and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Project Manager;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Project Manager any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Project Manager on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Project Manager to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Minimize tools for change to big changes - SOW change and change management are very different and need to be treated differently;

(8) Coordinate resolution of issues raised by the Contractor Project Manager pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(9) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(10) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(11) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule; and

(12) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Project Manager with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel, where feasible;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct Governance Assessments	
Subtask 1.1 Conduct Governance Assessments	Deliverable 1.1 Governance Assessments
Task 2 Perform Project Administration	
Subtask 2.1 Coordinate Project Activities for All SOWs, Including "Hand-offs" Between SOWs	Deliverable 2.1 Coordination of Project Activities Between SOWs
Subtask 2.2 Develop Status Reports	Deliverable 2.2 Status Reports
Subtask 2.3 Conduct Status Meetings	Deliverable 2.3 Status Meeting Minutes
Task 3 Perform Project Management and Ongoing Updates of the Project Control Documents	
Subtask 3.1 Maintain Project Work Plan	Deliverable 3.1 Project Work Plan Management
Subtask 3.2 Perform Error Management	Deliverable 3.2 Error Management
Subtask 3.3 Perform Risk Management	Deliverable 3.3 Risk Management
Subtask 3.4 Manage Project Staffing and Resources	Deliverable 3.4 Staffing and Resources Management
Subtask 3.5 Perform Configuration and	Deliverable 3.5 Configuration and Technology

Technology Change Management	Change Management
Subtask 3.6 Perform Issue Management	Deliverable 3.6 Issue Management
Subtask 3.7 Perform Project Change Management	Deliverable 3.7 Project Change Management
Subtask 3.8 Perform Quality Management	Deliverable 3.8 Quality Management
Subtask 3.9 Perform Deliverables Management	Deliverable 3.9 Deliverables Management
Subtask 3.10 Develop Procedures for Status Meetings/Reports	Deliverable 3.10 Procedures for Status Meetings/Reports
Task 4 Conduct Communications Strategy Review	
Subtask 4.1 Conduct Communications Strategy Review	Deliverable 4.1 Communications Strategy Update
Task 5 Review Organizational Change Management Strategy	
Subtask 5.1 Conduct Organizational Change Management Strategy Review	Deliverable 5.1 Organizational Change Management Strategy Update
Task 6 Maintain Project Library on MethodM Online	
Subtask 6.1 Maintain Project Library	Deliverable 6.1 Project Library
Task 7 Conduct Project Close-out Activities	
Subtask 7.1 Develop Project Close-out Checklist	Deliverable 7.1 Project Close-out Checklist
Subtask 7.2 Conduct Project Close-out	Deliverable 7.2 Project Close-out

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings, and all MethodM events, sessions, and workshops) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverables for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Project Manager and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make all changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct Governance Assessments
Task Description
As defined by task 2 (Establish Project Governance) of Exhibit A.2 (Project Initiation Statement of Work), Project governance will enable effective decision-making within and throughout the Project. To ensure committee structures and decision making processes are efficient and effective, Contractor will conduct quarterly Project governance assessments and provide County with identification of risks and recommendations for improvement.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Employees
  ○ County Project Director; and
  ○ County Project Manager.

Subtasks/Deliverables	

Subtask 1.1 Conduct Governance Assessments
Contractor will:
• Conduct a quarterly review of Project governance that includes an assessment of efficiency and effectiveness of Project governance structures and decision making processes. The quarterly review will, at a minimum, include:
  ○ Identification of risks and issues related to Project governance processes; and
  ○ Proposals to mitigate risks, and to resolve governance issues, including recommended changes to the governance structure and decision making process (e.g., additional or modified decision making processes).
• Review the recommendations with the County Project Director and develop a plan of action for implementing changes, mitigating risk, and resolving issues.
• Assist County with meetings and briefings to implement any County-Approved actions with regard to Contractor's recommendations.
• Deploy resources necessary to:
  ○ Support the County Project governance processes; and
  ○ Address and resolve identified issues and risks to the County Project governance processes.
Contractor will develop a draft written report regarding risks and issues, and recommendations regarding risk mitigation, issue resolution, and governance improvements, and submit the draft written report to County for review and feedback.
Contractor will review and incorporate County feedback and proposed changes into the written report regarding risks and issues and submit a final version to County for Approval.
	Deliverable 1.1: Governance Assessments
	• Quarterly governance review.
	• Written report regarding risks and issues, and recommendations regarding risk mitigation, issue resolution, and governance improvements.
	• Governance review session.
	• Availability of Contractor resources to support implementing recommendations resulting from assessments.
	
	Acceptance Criteria
	• County Approved quarterly governance review.
	• Quarterly Governance review incorporates, and is consistent with, County-provided input.
	• Quarterly review addresses all elements described in subtask 1.1 (Conduct Governance Assessments).

Task 2 Perform Project Administration	
Task Description	
Contractor will manage ongoing Project activities and regularly track and report on Project status as described in the following sub-tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager; and
  ○ Delivery Consultants.
• County Key Employees
  ○ County Project Director; and
  ○ County Workgroup leads.	

Subtasks/Deliverable	
Subtask 2.1 Coordinate Project Activities for All SOWs, Including "Hand-offs" Between SOWs During the course of the Project, Contractor will: • Track individual work streams as identified in Exhibit A.2 (Project Initiation Statement of Work), including monitoring dependencies among work streams outlined in the various SOWs. • Ensure consistency of process and progress among work streams outlined in the various SOWs, and conduct coordination meetings by reviewing all data collection workbooks (also known as a "**DCW**"), and design decision matrices (also known as a "**DDM**"), identifying potential conflicts and issues, and facilitating meetings with County to ensure consistency. • Monitor all issues and risks that may impact the Project Schedule using the Issue Management Plan and Risk Management Plan developed in Exhibit A.2 (Project Initiation Statement of Work) in accordance with Section 30 (Multi-Vendor Environment) of the Agreement. • Monitor the progress toward the completion of Milestones, Key Milestones, Deliverables, and Key Deliverables. • Identify any issues, risks or other barriers that are or may prevent completion of	**Deliverable 2.1 Coordination of Project Activities Between SOWs** • Updates to Issue and Risk Logs. • Input to Status Reports and Status Meetings. • Documented dependent and cross-work streams impacts and issues. **Acceptance Criteria** • Accurate reflection of dependencies, issues, and risks in the Project Control Documents. • Resolution of all pending issues that impact completion of Milestones, Key Milestones Deliverables, and Key Deliverables. • Project activities and meetings address all elements described in subtask 2.1 (Coordinate Project Activities for All SOWs, Including "Hand-offs" Between SOWs), and have been Approved by County.

Milestones, Key Milestones, Deliverables, or Key Deliverables, or that may otherwise jeopardize Project advancement. • Monitor progress in completing DCWs, DDMs, and other design and risk documents across all work streams. • Identify problems with Project activities that impact coordination across the SOWs (e.g., time management, resource conflicts, complexity, data quality, training issues), and provide County with recommendation for addressing them. • Resolve or facilitate the resolution of pending issues that remain for completion of Milestones, Key Milestones, Deliverables, and Key Deliverables. • Identify and communicate with Project team members who need to be notified in advance of upcoming activities, transitions, and hand-offs. • Identify and document impacts and issues among and between dependent and cross-work streams. • Conduct and facilitate meetings among and between dependent and cross-work stream teams to facilitate hands-offs and to address identified issues and impacts. • Continually verify that all activities are conducted in accordance with the Project Work Plan. • Maintain adherence to the Project Control Document and identify and resolve gaps between actual performance and the Services and the Project Control Document along with reconciliation mitigation recommendations.	
Subtask 2.2 Develop Status Reports Contractor will develop Status Reports in accordance with Section 10.2 (Reports and Meetings) of the Agreement and the procedures for Status Reports developed in subtask 4.14 (Develop Procedures for Status Meetings/Reporting) of Exhibit A.2 (Project	**Deliverable 2.2 Status Reports** • Status Reports as defined in the Agreement and the procedures for Status Reports. • Updated documents and dashboard on MethodM Online.

Initiation). The Status Reports will include, at a minimum, the following: • Period covered by the report; • Tasks, subtasks, Deliverables, goods, and Services scheduled for the reporting period which were completed; • Tasks, subtasks, Deliverables, goods, and Services scheduled for the reporting period which were not completed; • Tasks, subtasks, Deliverables, goods, and Services not scheduled for, but completed in, the reporting period; • Tasks, subtasks, Deliverables, goods, and Services scheduled to be completed in the next reporting period; • Summary of Project status and progress as of reporting date, including the progress toward completing Milestones, Key Milestones Deliverables, and Key Deliverables, with actual status with respect to the Project Schedule; • Reported progress on Key Deliverables; • Project issues and risks identified through the quality assurance and risk management process and status of identified issues and risks; • Issues and risks to be resolved; • Issues and risks resolved; • Updates to the Project Control Document (and associated documents); • Critical path analysis; • Status of any changes as documented in the Project Change Management Plan; • Project Schedule; and • Any other information that County or Contractor may, from time-to-time, reasonably request in writing, or that Contractor or County, as the case may be, may deem appropriate. In addition to the Status Reports, Contractor will update MethodM Online dashboards to reflect	**Acceptance Criteria:** • Status Reports address all elements described in subtask 2.2 (Develop Status Reports), and have been Approved by County. • Dashboard on MethodM Online has been updated as described in subtask 2.2 (Develop Status Reports), and has been Approved by County.

current Project status.	

Subtask 2.3 Conduct Status Meetings
Contractor will conduct Status Meetings in accordance with Section 10.2 (Reports and Meetings) of the Agreement and the procedures developed in subtask 4.12 (Develop Procedures for Status Meetings/Reports) of Exhibit A. 2(Project Initiation).
In preparation for each Status Meeting, Contractor will develop and distribute a Status Meeting agenda.
In preparation for each Status Meeting, Contractor will prepare a Status Report as described in Subtask 2.2 (Develop Status Reports).
During the Status Meetings, Contractor will:
• Keep an attendance log;
• Document meeting minutes including, at a minimum, decisions made during the meeting and outcomes for each agenda item;
• Document issues and risks, including proposed resolutions and mitigations; and
• Identify and track action items with, at minimum, the following information:
  ○ Action item description;
  ○ Owner;
  ○ Due date; and
  ○ Actual date of completion.
Following the Status Meetings, Contractor will circulate Status Meeting minutes for County review and Approval in accordance with the procedures for Status Meetings developed in subtask 4.12 (Develop Procedures for Status Meetings/Reports) of Exhibit A.2 (Project Initiation).
	Deliverable 2.3 Status Meeting Minutes
	• Status Meeting agenda.
	• Status Meeting report.
	• Status Meeting minutes, including attendance log, issues and risks, and action items.
	• Updated documents and dashboard on MethodM Online.
	
	Acceptance Criteria:
	• The Status Meeting report addresses all elements described in subtask 2.3 (Conduct Status Meetings), and has been Approved by County.
	• Status Meeting minutes address all elements described in subtask 2.3 (Conduct Status Meetings) and have been Approved by County.

Task 3 Perform Project Management and Ongoing Update of the Project Control Documents
Task Description
During the Project, Contractor will deliver and manage the Services for the Project in accordance with the Project Control Document. In addition, Contractor will maintain and update the Project Control

Document (and associated documents) on a timely, regular, and ongoing basis.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County Workgroup leads.	

Subtasks/Deliverables	
Subtask 3.1 Maintain Project Work Plan Contractor will maintain a Project Work Plan (also known as a "**PWP**") on an ongoing basis and update the PWP at a minimum on a bi-weekly basis. During Status Meetings, Contractor will provide County with an overview of the updates and changes to the PWP, including a description of the following: • Impact of changes on the overall Project Schedule and critical path of the impacted work stream; • Impact on resources; and • Dependencies and impact on related tasks. Contractor will review and incorporate County feedback and proposed changes into the PWP, and submit updates to the PWP to County for Approval. Contractor will also: • Ensure changes are reflected on the MethodM Online dashboard; • Maintain baseline and all revisions to the PWP in the Project Library; and • Notify all impacted Project team members of changes and updates.	**Deliverable 3.1 Project Work Plan Management** • Updates to the PWP. • Updated documents and dashboard on MethodM Online. **Acceptance Criteria** • Updates to PWP are complete and accurate, and are consistent with, County-provided input. • Updates and changes to the PWP have been Approved by County.
Subtask 3.2 Perform Error Management Contractor will manage the Error management process in accordance with the Error Management Plan (also known as an "**EMP**"). Contractor will manage and report on all Errors and their resolution according to the EMP.	**Deliverable 3.2 Error Management Plan Updates** • Updates to the EMP. • Updated documents and dashboard on MethodM Online.

Contractor will continuously update the EMP and: • Maintain baseline and all revisions to the EMP in the Project Library; • Periodically assess the processes documented in the EMP and provide County with recommendations for increasing the efficiency and effectiveness of the Error management process; • Review recommendations with County and solicit County feedback; and • Notify all impacted Project team members of the changes. Contractor will review and incorporate County feedback and proposed changes into the EMP and submit the updated version to County for Approval.	**Acceptance Criteria** • Updates to EMP incorporate, and are consistent with, County-provided input. • Updates and changes to the EMP have been Approved by County.

Subtask 3.3 Perform Risk Management
Contractor will manage the Project risks in accordance with the Risk Management Plan.
Contractor will manage and report on all risks and their mitigation, management, or resolution according to the Risk Management Plan.
Contractor will:
• Maintain the risk log on an ongoing basis.
• Provide County with an aggregate view of all identified risks on a weekly basis or more frequently as required, including:
  ○ Risk description;
  ○ Risk type (e.g., organizational, software, Go-Live, non-information technology, testing).
  ○ Risk severity;
  ○ Impact of the risk;
  ○ Risk probability; and
  ○ Recommended risk mitigation.
• Monitor risk status and progress on risk mitigation.
• On an ongoing basis, and as further requested by County, assess the processes
	Deliverable 3.3 Risk Management
	• Ongoing risk management.
	• Recommendations for increasing efficiency and effectiveness of the risk management process.
	• Updates to the Risk Management Plan.
	• Updated documents on MethodM Online.
	
	Acceptance Criteria
	• Ongoing, aggregate review of risks address all elements described in subtask 3.3 (Perform Risk Management).
	• Updates and changes to the Risk Management Plan have been Approved by County.

documented in the Risk Management Plan. • Provide County with recommendations for increasing efficiency and effectiveness of the risk management process. • Update the Risk Management Plan to include all recommendations Approved by County and inform all impacted Project team members of the change. • Maintain baseline and all revisions to the Risk Management Plan in the Project Library.	

Subtask 3.4 Manage Project Staffing and Resources
Contractor will monitor Project staffing and resources in accordance with the Project Staffing and Resource Management Plan and manage any Contractor Personnel changes in accordance with the Agreement.
Contractor will:
• Update the Project Staffing and Resource Management Plan upon:
  ○ County Approved changes to Contractor Key Employees in accordance with the Agreement;
  ○ Changes to County key staff (e.g., Project Manager, Workgroup Leads);
  ○ County Approved changes to the number of Contractor resources employed or required;
  ○ County Approved changes to Contractor or County roles and responsibilities; and
  ○ Changes in Contractor and County resources or staff, other than Contractor Key Employees, as needed.
• Inform all impacted Project team members of the change.
• Provide to County a description of other resources such as conference rooms, training rooms, connectivity, calendars, etc.
• Maintain baseline and all revisions to the Project Staffing and Resource Management
	Deliverable 3.4 Staffing and Resources Management
	• Ongoing staffing and resource management.
	• Updates to Project Staffing and Resource Management Plan.
	• Updated documents on MethodM Online.
	
	Acceptance Criteria
	• Updates and changes to the Project Staffing and Resource Management Plan have been Approved by County.

Plan in the Project Library.	
Subtask 3.5 Perform Configuration and Technology Change Management Contractor will manage and report on all configuration changes according to the Configuration and Technology Change Management Plan. Contractor will: • Assess the processes documented in the Configuration and Technology Change Management Plan as requested by County. • Provide County with recommendations for increasing the efficiency and effectiveness of the configuration and technology change management process. • Review and incorporate County feedback and proposed changes into the Configuration and Technology Change Management Plan. • Submit the updated version of the Configuration and Technology Change Management Plan to County for Approval. • Inform all impacted Project team members of County Approved changes to the Configuration and Technology Change Management Plan. • Maintain baseline and all revisions to the Configuration and Technology Change Management Plan in the Project Library.	**Deliverable 3.5 Configuration and Technology Change Management** • Ongoing configuration and technology change management. • Updates to the Configuration and Technology Change Management Plan. **Acceptance Criteria** • Changes to the Configuration and Technology Change Management Plan incorporate, and are consistent with, County-provided input. • Updates and changes to the Configuration and Technology Change Management Plan have been Approved by County.

Subtask 3.6 Perform Issue Management
Contractor will manage the Project issues in accordance with the Issue Management Plan.
Contractor will manage and report on all Project issues according to the Issue Management Plan.
Contractor will:
• Maintain the issue log on an ongoing basis.
• Provide the County with an aggregate view of all issues on a weekly basis or more frequently as required and provide:
  ○ Issue identifier;
  ○ Issue description;
  ○ Issue type (e.g., organizational, software,
	Deliverable 3.6 Issue Management
	• Ongoing maintenance and updates to issues log.
	• Maintain dashboard and documents in MethodM Online.
	• Update to Issue Management Plan.
	
	Acceptance Criteria
	• Aggregate report on issues addresses all elements described in subtask 3.6 (Perform Issue Management).
	• Updates to the Issue Management Plan incorporate, and are consistent with, County-

Go-Live, non-information technology, testing); ○ Severity of the issue; ○ Impact of the issue; ○ Estimated time to resolution; ○ Issue resolution owner; and ○ Recommendations for issue resolution. • Provide written alert reports, as set forth in Section 10.2.3 (Alert Reports) of the Agreement. • Periodically assess the processes documented in the Issue Management Plan, and if applicable, each issue's status in the escalation process. • Provide County with recommendations for increasing the efficiency and effectiveness of the issue management process. • Update the Issue Management Plan to include all recommendations Approved by County and inform all impacted Project team members of the change.	provided input. • Updates and changes to the Issue Management Plan have been Approved by County.
Subtask 3.7 Perform Project Change Management Contractor will manage all Project changes (i.e., activities that do not require an Amendment to the Agreement, nor affect the Contract Sum or timing of Productive Use at any Cluster) such that County is fully aware of and Approves such Project changes and all such Approved Project changes are documented. It is critical for the Parties to understand that a Project change will not result in any change to the Agreement, the Contract Sum, or the timing of Productive Use at any Cluster. Contractor will assist County in moving Project changes through the Project governance processes, documenting Project changes as required. Contractor will continuously update the Project Change Management Plan and: • Define, implement, and manage changes according to the Project Change	**Deliverable 3.7 Project Change Management** • Updates to Project Change Management Plan. • Maintain documents in MethodM Online. **Acceptance Criteria** • Updates to the Project Change Management Plan incorporate, and are consistent with, County feedback. • Updates and changes to the Project Change Management Plan have been Approved by County.

Management Plan; • Periodically assess the processes documented in the Project Change Management Plan; • Provide County with recommendations for increasing the efficiency and effectiveness of the Project Change Management process; • Review and incorporate County feedback and proposed changes into the Project Change Management Plan; • Submit the updated version to County for Approval; • Inform all impacted Project team members of the change; and • Maintain baseline and all revisions to the Project Change Management Plan in the Project Library.	
Subtask 3.8 Perform Quality Management Contractor will manage the quality management process in accordance with the Quality Management Plan. Contractor will: • Document quality control criteria and metrics; • Identify and document issues related to quality; • Move quality issues through the resolution process; • Track and monitor the quality of each Deliverable; and • Identify and document deviations from the documented baseline. Contractor will continuously update the Quality Management Plan and: • Inform all impacted Project team members of the change; • Maintain baseline and all revisions to the Quality Management Plan in the Project Library; • Periodically assess the processes documented in the Quality Management	**Deliverable 3.8 Quality Management** • Updates to Quality Management Plan. • Resolution of quality issues. • Maintain documents on MethodM Online. **Acceptance Criteria** • Quality issues resolved to the extent that they do not impact schedule or functionality. • Updates to the Quality Management Plan incorporate, and are consistent with, County-provided input. • Updates and changes to the Quality Management Plan have been Approved by County.

Plan; • Provide County with recommendations for increasing the efficiency and effectiveness of the quality management process; • Review recommendations and incorporate County feedback and proposed changes into the Quality Management Plan; and • Submit an updated version of the Quality Management Plan to County for Approval.	
Subtask 3.9 Perform Deliverables Management Contractor will manage the Deliverables in accordance with the Deliverables Management Plan. Contractor will: • Complete a DED for each Deliverable. • Provide each Deliverable with a completed DED to County. • Review County feedback on the Deliverable. • Monitor and ensure the quality of the Deliverables. • Identify and provide explanations for any deviations of each Deliverable from the DED. • Update Deliverables and DEDs to address County feedback. • Continuously update the Deliverables Management Plan. • Inform all impacted Project team members of any changes. • Maintain baseline and all changes to the Deliverables Management Plan in the Project Library. • Assess the processes documented in the Deliverables Management Plan as requested by County. • Provide County with recommendations for increasing the efficiency and effectiveness of the Deliverables management process. • Review recommendations with County and incorporate County-Approved changes into the Deliverables Management Plan. • Submit updated version of the Deliverables	**Deliverable 3.9 Deliverables Management** • Recommendations for increasing the efficiency and effectiveness of the Deliverables management process. • Updates to Deliverables Management Plan. • Completed DED for each Deliverable. **Acceptance Criteria** • Each Deliverable and each DED incorporates, and is consistent with, County-provided input. • Each DED has been Approved by County. • Updates and changes to the Deliverables Management Plan incorporate, and are consistent with, County-provided input. • Updates and changes to the Deliverables Management Plan have been Approved by County.

Management Plan to County for Approval.	
Subtask 3.10 Develop Procedures for Status Meetings/Reports Contractor will periodically assess the processes documented in the procedures for Status Meetings and Status Reports developed in subtask 4.12 (Develop Procedures for Status Meetings/Reporting) of Exhibit A.2 (Project Initiation) ("Procedures for Status Meetings/Reports") and provide County with recommendations for improvement. As requested by County, Contractor will: • Update the Procedures for Status Meetings/Reports in accordance with County feedback. • Inform all impacted Project team members of any County-Approved changes to the Procedures for Status Meetings/Reports. • Maintain baseline and all revisions to the Procedures for Status Meetings/Reports in the Project Library.	**Deliverable 3.10 Updated Procedures for Status Meetings/Reporting** • Updates to Procedures for Status Meetings/Reports. • Recommendations for improvement of the Procedures for Status Meetings/Reports. **Acceptance Criteria** • Updates and changes to the Procedures for Status Meetings/Reports incorporate, and are consistent with, County feedback. • Updates and changes to the Procedures for Status Meetings/Reports have been Approved by County.

Task 4 Conduct Communications Strategy Review	
Task Description	
During the Project, County will implement a Project Communications Strategy. Contractor will conduct a quarterly assessment of the effectiveness of the Project-related communication and provide County with recommendations.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County Change Management and Education Director.	

Subtasks/Deliverables	
Subtask 4.1 Conduct Communications Strategy Review County will develop and implement a Project Communications Strategy based at least in part	**Deliverable 4.1 Communications Strategy Update** • Review of Project Communications Strategy developed following the Contractor-led

on the advice and recommendations provided in Contractor-led Leading Strategic Change Sessions and its event-based follow ups. Contractor will review the initial Project Communications Strategy and provide advice and recommendations. Contractor will conduct a quarterly assessment of the Project Communications Strategy and its implementation and outcomes that, at a minimum, includes: • Assessment of the effectiveness of the Project Communications Strategy and County activities related to that strategy. • Identification of issues related to communications. • Recommendations for communications approaches and activities to enhance the effectiveness of communications and enhance the likelihood of overall Project success. • Recommendations changes to the overall Project Communications Strategy. • Development of communication materials, presentations, and content for County use. • Facilitation of a review session of the quarterly Project Communications Strategy assessment with County Project team.	Leading Strategic Change Session. • Quarterly Project Communications Strategy review. • Project Communications Strategy review session. • Recommendations for improvement of County Project Communications Strategy. • Communications materials, presentations, and content for County's use. **Acceptance Criteria** • Quarterly Project Communications Strategy review addresses all elements described in subtask 4.1 (Conduct Communications Strategy Review). • Quarterly Project Communications Strategy review has been Approved by County.

Task 5 Review Organizational Change Management Strategy
Task Description
During the Project, County will implement the Organizational Change Management Strategy ("**OCM Strategy**"). Contractor will conduct a quarterly assessment of the effectiveness of the Project-related OCM and provide County with recommendations.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Clinical Strategist; and
  ○ Training Lead.
• County Key Employees
  ○ County Project Director;

○ County Project Manager; ○ Physician Champions; and ○ Change Management and Education Director.
Subtasks/Deliverables

Subtask 5.1 Conduct Organizational Change Management Strategy Review County will develop and implement an OCM Strategy based at least in part in the advice and recommendations provided in the Contractor-led Leading Strategic Change Sessions and its event-based follow ups. Contractor will review the initial OCM Strategy and provide advice and recommendations. Contractor will conduct a quarterly assessment of County's OCM Strategy and its implementation and outcomes that, at a minimum, includes: • Assessment of the effectiveness of the OCM Strategy and County activities related to that strategy. • Identification of issues related to organizational change management. • Recommendations for approaches and activities to enhance the effectiveness of organizational change and enhance the likelihood of overall Project success. • Recommendations for potential changes to the OCM Strategy. • Facilitation of a review session of the quarterly OCM Strategy assessment with County Project team.	**Deliverable 4.1 Organizational Change Management Strategy Update** • Review of the initial OCM Strategy developed following the Contractor-led Leading Strategic Change Session. • Quarterly OCM Strategy review. • OCM Strategy review session. • Recommendations for improvement of County's OCM Strategy. **Acceptance Criteria** • Quarterly assessment of County's OCM Strategy assessment addresses all elements described in subtask 5.1 (Conduct Organizational Change Management Strategy Review). • Quarterly OCM Strategy review has been Approved by County.

Task 6 Maintain Project Library on MethodM Online
Task Description
During the Project, documents and artifacts developed and collected as part of the Project activities will be managed, stored, and archived. Contractor will maintain Project documents and artifacts in a Project library on MethodM Online ("**Project Library**").
Personnel Requirements
• Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; and

<table>
<tr><td colspan="2">

Delivery Consultants.

County Key Employees

County Project Director;
County Project Manager; and
County Workgroup leads.

</td></tr>
<tr><th colspan="2">Subtasks/Deliverables</th></tr>
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Subtask 6.1 Maintain Project Library
Contractor will maintain Project documents and artifacts in a Project library on MethodM Online. Contractor will develop guidelines for managing Project documents in the Project Library, including:

Folder structure;
Naming convention;
Document templates for specialized purposes (e.g., risk log, issue log, cross-stream communication);
Document standard/format;
Document check in/check-out rules;
User access and privileges;
Document ownership; and
Relationship and governance between County and Contractor Project Library.

Throughout Project, Contractor will:

Maintain the Project Library;
Update document management guidelines;
Manage user access roles and privileges;
Coordinate the use of document management systems between County and Contractor; and
Develop quick-start guides and other training materials for new County personnel.

Upon Project completion, Contractor will archive and deliver an offline copy of the Project Library to County in data formats specified and agreed upon by County.
</td><td>
Deliverable 6.1 Project Library

Guidelines to Project Library.
Ongoing management of Project Library.
Quick start guides and other training materials.
Offline copy of the Project Library.

Acceptance Criteria

Guidelines for managing Project documents and artifacts in the Project Library address all elements described in subtask 6.1 (Maintain Project Library).
Guidelines for the Project Library have been Approved by County.

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Task 7 Conduct Project Close-out Activities	
Task Description	
Contractor will be responsible for Project close-out activities. The purpose of these activities is to resolve any outstanding Project issues, obtain formal agreement from the Project governance processes to officially close out the Project, ensure that there is an official hand over of the EHR System from the Project team to the maintenance and operations team, and conduct a thorough review of the Project.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Delivery Consultants;
  ○ Clinical Strategist; and
  ○ Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Technical lead; and
  ○ County Education Director.	

Subtasks/ Deliverables	
Subtask 7.1 Develop Project Close-out Checklist Contractor will develop a Deployment and Project Close-out Checklist in accordance with subtask 3.6 (Develop Deployment and Project Close-out Checklist) in Exhibit A.23 (Deployment). Contractor will review the Deployment and Project Close-out Checklist with County. Contractor will incorporate County feedback and proposed changes into the Deployment and Project Close-out Checklist and submit a final version to County for Approval.	**Deliverable 7.1 Project Closeout Checklist** • Deployment and Project Close-out Checklist. **Acceptance Criteria:** • Updated Deployment and Project close-out checklist has been Approved by County.
Subtask 7.2 Conduct Project Close-out During the Project close-out, Contractor will: • Conduct all of the activities defined in the Deployment and Project Close-Out Checklist and tasks 10 (Conduct Performance Verification and Provide Performance Verification Report) and 11 (Develop Final Acceptance Deliverable) of Exhibit A.23 (Deployment); • Review all aspects of Project close-out with	**Deliverable 7.2 Project Close-out** • Project close-out activities as identified in the Deployment and Project Close-out Checklist. **Acceptance Criteria:** • County-Approved Project close-out activities.

County; and • Address all outstanding issues and activities.	

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.2 (Project Initiation Statement of Work)

to the

Electronic Health Records System and Services Agreement

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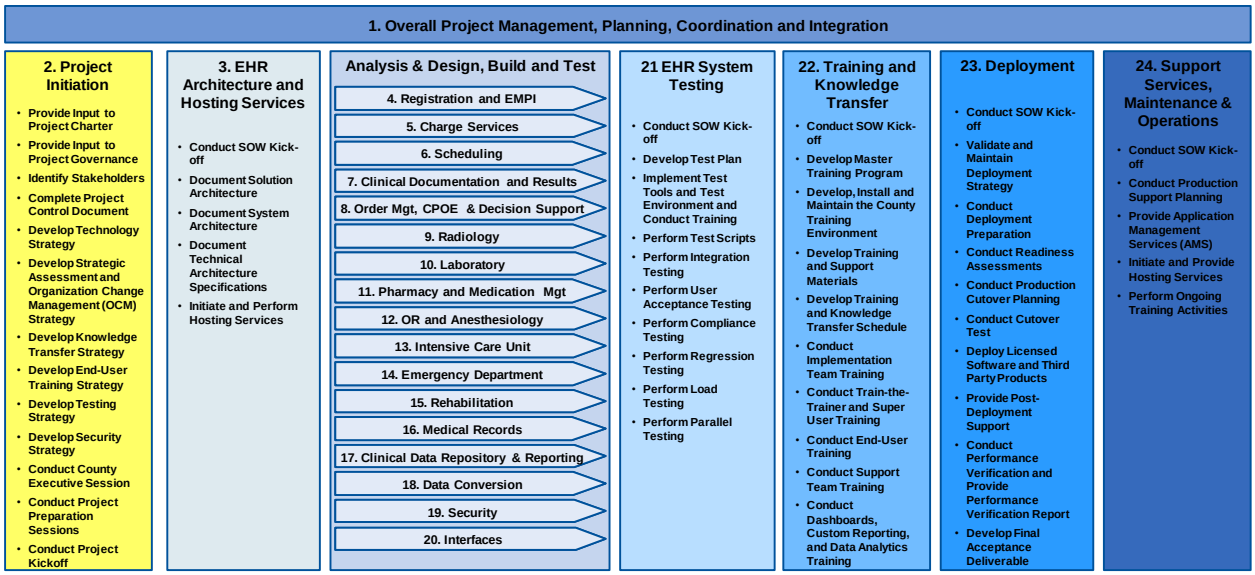
1. Introduction

This Exhibit A.2 (Project Initiation Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.2 (Project Initiation Statement of Work). The completion of any phase in a period of time shorter or longer that that specified below shall not increase the Contract Sum.

This is Exhibit A.2 (Project Initiation Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide, among other elements, an overall Project management framework, and describe the nature of the Services, expected outcomes, governance processes, and tasks.

3. SOW Summary

3.1. Overview

This SOW addresses all initiation activities for the Project. The purpose of Project initiation is to begin to define the overall parameters of the Project and establish the appropriate Project management and quality environment required to complete the Project. This includes the development of the Project governance structure, the development of a Project charter as well as all other planning documents and strategies that will be used, updated, and maintained throughout the course of the Project.

3.2. SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3. Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.

3.4. Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – The Project timeline is too short to hide difficult messages. Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5. Schedule

The commencement date for Exhibit A.2 (Project Initiation Statement of Work) will begin upon the Effective Date of the Agreement. Notwithstanding the foregoing, Contractor is required to provide several Deliverables in this SOW prior to submission of the Agreement to the Board for Approval. This SOW is scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.2 (Project Initiation Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1. Contractor Project Manager Responsibilities

Contractor Project Manager will be designated as the individual for this SOW to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Project Manager's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2. Specific County Tasks

4.2.1. County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Project Initiation SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Project Manager and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Project Manager;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Project Manager any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Deliver Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Project Manager to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Project Manager pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project Status Meetings with Contractor Project team members, and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Project Manager with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2. Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities;

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1: Provide Input to Project Charter	
Subtask 1.1 Provide Input to Project Charter	Deliverable 1.1 Input for Project Charter (Key Deliverable)
Task 2: Provide Input to Project Governance	
Subtask 2.1 Provide Input to Project Governance Structure	Deliverable 2.1 Input to Project Governance Structure (Key Deliverable)
Subtask 2.2 Provide Input to Project Governance Processes	Deliverable 2.2 Input to Project Governance Processes (Key Deliverable)
Task 3: Identify Stakeholders	
Subtask 3.1 Identify Stakeholders	Deliverable 3.1 Stakeholder Analysis (Key Deliverable)
Task 4: Complete Project Control Document	
Subtask 4.1 Develop Project Control Document Framework	Deliverable 4.1 Project Control Document Framework (Key Deliverable)
Subtask 4.2 Develop Project Work Plan	Deliverable 4.2 Project Work Plan (Key Deliverable)
Subtask 4.3 Develop Error Management Plan	Deliverable 4.3 Error Management Plan (Key Deliverable)
Subtask 4.4 Develop Project Communications Strategy	Deliverable 4.4 Project Communications Strategy (Key Deliverable)
Subtask 4.5 Develop Risk Management Plan	Deliverable 4.5 Risk Management Plan (Key Deliverable)
Subtask 4.6 Develop Project Staffing and Resource Management Plan	Deliverable 4.6 Project Staffing and Resource Management Plan (Key Deliverable)

Task/Subtask Name	Deliverables
Subtask 4.7 Develop Configuration and Technology Change Management Plan	Deliverable 4.7 Configuration and Technology Change Management Plan (Key Deliverable)
Subtask 4.8 Develop Issue Management Plan	Deliverable 4.8 Issue Management Plan (Key Deliverable)
Subtask 4.9 Develop Project Change Management Plan	Deliverable 4.9 Project Change Management Plan (Key Deliverable)
Subtask 4.10 Develop Quality Management Plan	Deliverable 4.10 Quality Management Plan (Key Deliverable)
Subtask 4.11 Develop Deliverables Management Plan	Deliverable 4.11 Deliverables Management Plan (Key Deliverable)
Subtask 4.12: Develop Procedures for Status Meetings/Reporting	Deliverable 4.12 Procedures for Status Meetings/Reporting (Key Deliverable)
Subtask 4.13: Develop Project Control Document	Deliverable 4.13 Project Control Document (Key Deliverable)
Task 5: Develop Technology Strategy	
Subtask 5.1 Conduct Technical Assessment	Deliverable 5.1. Technical Assessment (Key Deliverable)
Subtask 5.2 Develop Technology Strategy	Deliverable 5.2 Technology Strategy (Key Deliverable)
Task 6: Develop Strategic Assessment and Organization Change Management Strategy	
Subtask 6.1 Conduct Strategic Assessment	Deliverable 6.1 Strategic Assessment (Key Deliverable)
Subtask 6.2: Develop Organizational Change Management Strategy	Deliverable 6.2 Organizational Change Management Strategy (Key Deliverable)
Task 7: Develop Knowledge Transfer Strategy	
Subtask 7.1 Develop Knowledge Transfer Strategy	Deliverable 7.1 Knowledge Transfer Strategy (Key Deliverable)
Task 8: Develop End-User Training Strategy	
Subtask 8.1 Develop End-User Training Strategy	Deliverable 8.1 End User Training Strategy (Key Deliverable)
Task 9: Develop Testing Strategy	
Subtask 9.1 Develop Testing Strategy	Deliverable 9.1 Testing Strategy (Key Deliverable)
Task 10: Develop Security Strategy	
Subtask 10.1 Develop Security Strategy	Deliverable 10.1 Security Strategy (Key Deliverable)
Task 11: Conduct County Executive Session	

Task/Subtask Name	Deliverables
Subtask 11.1 Conduct County Executive Session	Deliverable 11.1 County Executive Session (Key Deliverable)
Task 12: Conduct Project Preparation Sessions	
Subtask 12.1 Conduct Project Management Workshop	Deliverable 12.1 Proficiency Assessment (Key Deliverable)
Subtask 12.2 Conduct Project Team Workshop	Deliverable 12.2 Project Team Workshop (Key Deliverable)
Subtask 12.3 Conduct PC Basics Course	Deliverable 12.3 PC Basics Course (Key Deliverable)
Subtask 12.4 Conduct Solution Build and Maintain Course	Deliverable 12.4 Solution Build and Maintain Course (Key Deliverable)
Subtask 12.5 Conduct Solution and Tools Introduction Workshop	Deliverable 12.5 Solution and Tools Introduction Workshop (Key Deliverable)
Subtask 12.6 Conduct Licensed Software and Third-Party Products Fundamentals Course	Deliverable 12.6 Licensed Software and Third-Party Products Fundamentals Course (Key Deliverable)
Subtask 12.7 Conduct Clinical and Business Process Analysis Training	Deliverable 12.7 Clinical and Business Process Analysis Training (Key Deliverable)
Subtask 12.8 Conduct IT Analyst Prep Sessions	Deliverable 12.8 IT Analyst Prep Sessions (Key Deliverable)
Subtask 12.9 Conduct Physician and Nursing (Clinician) Sessions	Deliverable 12.9 Physician and Nursing (Clinician) Sessions (Key Deliverable)
Subtask 12.10 Conduct Leading Strategic Change Workshop	Deliverable 12.10 Leading Strategic Change Workshop (Key Deliverable)
Task 13: Conduct Project Kickoff	
Subtask 13.1 Conduct Project Kickoff	Deliverable 13.1 Project Kickoff (Key Deliverable)

5.1. Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project Deliverable's DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Project Manager and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2. Tasks

Contractor shall be responsible for performing the following as it relates to the Services to be provided under this SOW.

Task 1 Develop Project Charter
Task Description
Contractor will support County in developing a Project charter.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Resources
  ○ County Project Director; and
  ○ County Project Manager.

Task 1 Develop Project Charter	
Subtasks/Deliverables	
Subtask 1.1 Provide Input to Project Charter Contractor will support County in the creation of a Project charter. Contractor will: • Provide County with Project charter sample templates, and sample content; • Identify content which was developed to date as part of the Project Control Document (e.g. project resources, schedule) and which is relevant for inclusion in the Project charter; • Review the County-developed Project charter; • Provide feedback and recommendations; and • Validate that the Project charter will suit the purpose of directing and framing the overall Project.	**Deliverable 1.1 Input for Project Charter** • Project charter templates. • Sample Project charter content developed to date as part of the Project Control Document. • Feedback and recommendations based on draft Project charter. • Validation of Project charter. **Acceptance Criteria:** • Templates and content relevant for inclusion into the Project charter.

Task 2 Provide Input to Project Governance
Task Description
A Project governance framework will be developed and implemented. This framework will provide a set of processes and structures that will enable effective decision-making within the Project and will address, among other subjects, the structure, roles and responsibilities of governance participants and the decision making authority and processes.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Integration Architect;
  ○ Clinical Strategist; and
  ○ Solution Architect.
• County Key Resources
  ○ County Project Director; and
  ○ County Project Manager.

Subtasks/Deliverables	
Subtask 2.1 Provide Input to Project Governance Structure Contractor will provide sample documents for a Project governance structure that, at a minimum, includes recommendations for:	**Deliverable 2.1 Input to Project Governance Structure** • Sample Project governance templates. • Sample content (e.g., organizational structures, role statements, mandates,

Task 2 Provide Input to Project Governance	
• Governance structure indicating the type of decisions needed as well as descriptions which outline the nature of the responsibilities of each governance participant or group; • Criteria to be used to identify and select governance participants (e.g., organizational authority required, availability for meetings, level of influence in the organization, clinical knowledge,); • Contractor participation in governance activities (e.g., number of Contractor participants, title of Contractor participants, and the role of each participant); • Interrelationship between governance participants (e.g., reporting relationships, communication channels,); • Decision flow among governance participants (e.g., information and escalation processes); and • Frequency and schedule of meetings. Contractor will review the draft Project governance structure and provide written recommendations for changes to Project governance structures and processes, information flow, communication channels and other means to enhance the effectiveness and the efficiency of decision making processes.	committee charters, selection criteria, responsibility assignment matrices). • Review of governance structure.. • Recommendations for improvement of County-drafted Project governance structure. **Acceptance Criteria:** • Sample content provided addresses all elements described under subtask 2.1 (Provide Input to Project Governance Structure). • Sample content provided is of sufficient completeness to address governance of entire Project across DHS, including all Domains, Venues, and Locations.
Subtask 2.2 Provide Input to Project Governance Processes Contractor will provide County with templates, documents and written recommendations for decision making and communication processes that, at a minimum, include: • Internal County conflict resolution process; • Criteria and management processes for creating, evaluating and managing exception requests; • Evaluation criteria for exceptions; • Means to address issues raised by special interest groups; • Issue and risk escalation and resolution	**Deliverable 2.2 Input to Project Governance Processes** • Sample Project governance processes templates. • Sample content (e.g., organizational structures, role statements, selection criteria, RACI charts,). • Review of governance processes. • Recommendations for improvement of the County-drafted Project governance processes. **Acceptance Criteria:** • Sample content provided will address all

Task 2 Provide Input to Project Governance	
process; • Tracking tools; and • Processes and structures for cross-Project integration to address issues and differences arising among County stakeholders representing different Domains, Venues and Locations. Contractor will review draft County-documented governance processes and provide written recommendations for enhancing the County-developed governance processes.	elements described in subtask 2.2 (Provide Input to Project Governance Processes). • Sample content provided will be of sufficient completeness to address governance of entire Project across DHS, including all Domains, Venues, and Locations.

Task 3 Identify Stakeholders	
Task Description	
The necessary County Project stakeholders will be identified and a strategy will be developed for managing these stakeholders throughout the Project.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Employees
  ○ County Project Director; and
  ○ County Project Manager.	

Subtasks/Deliverables	

Subtask 3.1 Identify Stakeholders
Contractor will provide analytical frameworks, templates, and written recommendations related to:
• Overall stakeholder categories (types of stakeholders); including:
  ○ Executive leadership;
  ○ Clinical leadership;
  ○ Technical leadership;
  ○ Clinical staff; and
  ○ Technical staff.
• Project-specific stakeholder roles and responsibilities; including:
  ○ IT analyst;
  ○ Workgroup lead;
	Deliverable 3.1 Stakeholder Analysis
	• Analytical frameworks, templates and written recommendations.
	• List of stakeholder categories.
	• Draft Stakeholder Analysis.
	• Final Stakeholder Analysis.
	
	Acceptance Criteria:
	• Contractor-provided analytical frameworks, templates and written recommendations address all elements described in subtask 3.1 (Identify Stakeholders), and have been Approved by County.
	• Draft Framework Analysis includes recommendations regarding adequacy of team capabilities (skills and knowledge) and

Task 3 Identify Stakeholders	
○ Workgroup members; and ○ Subject Matter Experts. • Contractor counterparts by stakeholder category. Contractor will develop a Stakeholder Analysis which will include recommendations regarding adequacy of team capabilities (skills and knowledge) and capacity (number of resources) and submit to County for review. Contractor will review and incorporate County feedback and proposed changes into the Stakeholder Analysis and submit a final version to County for Approval.	capacity (number of resources). • Final Stakeholder Analysis incorporates, and is consistent with, County-provided input. • Final Stakeholder Analysis has been Approved by County.

Task 4 Complete Project Control Document
Task Description
Contractor will complete a Project Control Document ("**PCD**") with input from the appropriate County executive and clinician stakeholders. Following County Approval of the PCD, it will be used by Contractor and County to manage, track, and evaluate Project performance. The PCD will address, among other subjects: • Project Work Plan ("**PWP**")* • Error Management Plan ("**EMP**") • Project Communications Strategy • Risk Management Plan • Project Staffing and Resource Management Plan* • Configuration and Technology Change Management Plan ("**CTCMP**") • Project Team Organization Plan • Issue Management Plan • Project Change Management Plan • Quality Management Plan • Deliverables Management Plan • Project Work Plan Management Document • Procedures for Status Meetings / Reporting Items marked with a * are required prior to submission of the Agreement to the Board for Approval.
Personnel Requirements
• Contractor Key Employees ○ Contractor Project Director; and ○ Contractor Project Manager. • County Key Employees ○ Project Director; and ○ Project Manager.

Task 4 Complete Project Control Document	
Subtasks/Deliverables	
Subtask 4.1 Develop Project Control Document Framework The PCD framework will provide the overall structure and procedures which will be used by Contractor and County to manage, track, and evaluate Project performance. The PCD must define the process for managing the Project schedule and, at a minimum, address: • Scheduling methodology and tools; • Schedule and milestone tracking methodology; • Scheduling performance measures during the Project across all SOWs; • Critical path identification and dependencies; • Resource allocation methodology; and • Methodology to account for Licensed Software Revisions during the course of the Project. Contractor will develop a draft PCD framework and submit it to County for review and feedback. The PCD framework will address all components of the PCD and include an outline and/or table of contents for all sub-components of the PCD. Contractor will review and incorporate County feedback and proposed changes into the PCD framework and submit a final version to County for Approval.	**Deliverable 4.1 Project Control Document Framework** • PCD framework. **Acceptance Criteria:** • PCD framework incorporates, and is consistent with, County-provided feedback. • PCD framework has been Approved by County.
Subtask 4.2 Develop Project Work Plan Contractor will develop a PWP that lists, as further detailed below, all tasks and subtasks listed in each of the SOWs, and any others as required to deliver the Services. The PWP will be developed in a MethodM Online compatible version of Microsoft Project. The PWP will, at a minimum, include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources assigned to each Deliverable, task, and subtask;	**Deliverable 4.2 Project Work Plan** • Project Work Plan. **Acceptance Criteria:** • Final PWP incorporates, and is consistent with, County-provided input. • Final PWP addresses all required elements described in subtask 4.2 (Develop Project Work Plan). • Final PWP has been Approved by County.

Task 4 Complete Project Control Document	
• Start date and date of completion for each Deliverable, task, and subtask; and • Identification of the grouping of each task or grouping of tasks and Deliverables to specific Milestones and Key Milestones. Contractor will develop a draft PWP and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the PWP and submit a final version to County for Approval.	
Subtask 4.3 Develop Error Management Plan Contractor will develop an EMP that documents, as further detailed below, the approach to Error management, including methodology, recommended tool(s) and escalation processes. Contractor will develop a draft EMP and submit to County for review and feedback. The EMP, at a minimum, will include: • Definitions of different severity (or criticality) levels for Errors; • Communication paths, processes, and time frames for dealing with different Error levels; • Tools for tracking and reporting on Errors and Error resolution; and • Tools for capturing and methods of communicating "Project lessons" to minimize the repetition of Errors. Contractor will review and incorporate County feedback and proposed changes into the EMP and submit a final version to County for Approval.	**Deliverable 4.3 Error Management Plan** • Error Management Plan. **Acceptance Criteria:** • Final EMP incorporates, and is consistent with, County-provided input. • Final EMP addresses all required elements described in subtask 4.3 (Develop Error Management Plan). • Final EMP has been Approved by County.
Subtask 4.4 Develop Project Communications Strategy Contractor will provide documents that include frameworks, templates, approach, guidelines, Best Practices, and sample content, including: • Recommendations for approaches to create awareness tailored to each stakeholder's category; • Recommendations for implementing communications, including access to a comprehensive library or collection of examples;	**Deliverable 4.4 Project Communications Strategy** • Project Communication Strategy frameworks, templates and Best Practices. • Sample content (e.g. communications matrix). • Recommendations for improvement of County draft Project Communications Strategy. **Acceptance Criteria:**

Task 4 Complete Project Control Document	

• Recommendations for the role of communications in the overall organizational change effort; and
• Communication activities that address:
  ○ Target audiences;
  ○ Communications content;
  ○ Communication channels;
  ○ Messengers; and
  ○ Frequency.
Contractor will review County's documented Project Communications Strategy and provide written recommendations for improvement.
	• Project Communications strategy frameworks, templates and Best Practices include all required elements described in subtask 4.4 (Develop Project Communications Strategy).

Subtask 4.5 Develop Risk Management Plan Contractor will develop a comprehensive Risk Management Plan that documents, at a minimum, the following: • Approach to risk analysis (the evaluation of risks and risk interactions to assess the range of possible Project outcomes); • Risk mitigation (the identification of ways to minimize or eliminate Project risks); • Process and frequency for assessing established risk analysis and mitigation approaches; • Risk tracking/control (methods to ensure that all steps of the risk management process are being followed and, risks are being mitigated effectively); and • Process for risk communication to County and within Contractor's organization and escalation. Contractor will develop a draft Risk Management Plan and submit it to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the Risk Management Plan and submit a final version to County for Approval.	**Deliverable 4.5 Risk Management Plan** • Risk Management Plan. **Acceptance Criteria:** • Final Risk Management Plan incorporates, and is consistent with, County-provided input. • Final Risk Management Plan addresses all required elements described in subtask 4.5 (Develop Risk Management Plan). • Final Risk Management Plan has been Approved by County.
Subtask 4.6 Develop Project Staffing and Resource Management Plan Contractor will develop a Project Staffing and Resource Management Plan that, at a minimum, includes:	**Deliverable 4.6 Project Staffing and Resource Management Plan** • Project Staffing and Resource Management Plan.

Task 4 Complete Project Control Document	
• Fully loaded Contractor resource staffing commitments (i.e., identification of FTE equivalent or hours for all resources by Key Milestone); • Project Organizational Chart that aligns with Contractor Licensed Software, Third-Party Products, and work streams documented in the SOWs; • Mapping of staffing to the roles, responsibilities, and activities of the PWP; • Reporting relationships; • Description of other resources such as conference rooms, training rooms, connectivity, calendars, etc.; • Education Tracker to monitor training received or required for specific County staff/roles; and • Guidelines for knowledge transfer between County personnel as they change roles, leave, or join the Project. Contractor will develop a draft Project Staffing and Resource Management Plan and submit it to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Project Staffing and Resource Management Plan and submit a final version to County for Approval.	**Acceptance Criteria:** • Final Project Staffing and Resource Management Plan incorporates, and is consistent with, County-provided input. • Final Project Management and Staffing Plan addresses all required elements described in subtask 4.6 (Develop Project Staffing and Resource Management Plan). • Final Project Staffing and Resource Management Plan has been Approved by County.
Subtask 4.7 Develop Configuration and Technology Change Management Plan Contractor will provide a CTCMP that defines the process for managing changes to the Licensed Software and the Hosting Environment, including software and hardware components. The CTCMP will address, among other subjects: • Servers and network devices on County premises; and • Operating system software and tools which reside on devices on County premises. Contractor will provide its current change management policy/procedure, develop a draft CTCMP and submit to County for review and feedback.	**Deliverable 4.7 Configuration and Technology Change Management Plan** • Configuration and Technology Change Management Plan. **Acceptance Criteria:** • Final CTCMP incorporates County specific information on communication and processes. • Final CTCMP addresses all required elements described in subtask 4.7 (Develop Configuration and Technology Change Management Plan). • Final CTCMP has been Approved by County.

Task 4 Complete Project Control Document	
Contractor will review and incorporate County specific information on communications and processes into the CTCMP and submit a final version to County for Approval.	
Subtask 4.8 Develop Issues Management Plan The Issues Management Plan will allow for the tracking and prioritizing of issues, defining and documenting action plans for issue resolution, and identifying issue owners who are responsible for driving the issue to resolution. Contractor will draft an Issues Management Plan which will include descriptions of processes and tools for at least the following items: • Issue identification (including dates); • Issue categorization; • Severity; • Impact; • Approach to resolution; • Identification of individuals responsible for issue resolution; • Expected resolution date; and • Escalation. Contractor will submit the Issues Management Plan to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Issues Management Plan and submit a final version to County for Approval.	**Deliverable 4.8 Issue Management Plan** • Issues Management Plan. **Acceptance Criteria:** • Final Issues Management Plan incorporates, and is consistent with, County-provided input. • Final Issues Management Plan addresses all required elements described in subtask 4.8 (Develop Issues Management Plan). • Final Issues Management Plan has been Approved by County.
Subtask 4.9 Develop Project Change Management Plan The Project Change Management Plan will delineate the formal process through which all Project changes (i.e. activities that do not require an Amendment to the Agreement, nor affect the Contract Sum or timing of Productive Use at any Cluster) are managed such that County is fully aware of and Approves such Project changes and all such Approved Project changes are documented. It is critical for all parties to understand that a Project change will not result in any change to the Agreement, to the Contract Sum, or to the	**4.9 Project Change Management Plan** • Project Change Management Plan. **Acceptance Criteria:** • Final Project Change Management Plan incorporates, and is consistent with, County-provided input. • Final Project Change Management Plan addresses all required elements described in subtask 4.9 (Develop Project Change Management Plan). • Final Project Change Management Plan has

Task 4 Complete Project Control Document	
timing of Productive Use at any Cluster. The Project Change Management Plan, at a minimum, must address: • Process for identifying Project changes; • Triaging process for Project changes; • Templates for documenting the description and estimated effort to implement proposed changes; • Roles, and responsibilities for documenting Project changes; and • Escalation process. Contractor will draft a Project Change Management Plan and submit to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Project Change Management Plan and submit a final version to County for Approval.	been Approved by County.
Subtask 4.10 Develop Quality Management Plan Contractor will develop a Quality Management Plan that documents Contractor's approach and methodology for quality assurance of Project Deliverables. The Quality Management Plan, at a minimum, must include: • Contractor roles and responsibilities with respect to quality management; • Quality control criteria and metrics; • Process to detect quality issues related to quality; and • Process for quality issue resolution. Contractor will draft a Quality Management Plan and submit to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Quality Management Plan and submit a final version to County for Approval.	**Deliverable 4.10 Quality Management Plan** • Quality Management Plan. **Acceptance Criteria:** • Final Quality Management Plan incorporates, and is consistent with, County-provided input. • Final Quality Management Plan addresses all required elements described in subtask 4.10 (Develop Quality Management Plan). • Final Quality Management Plan has been Approved by County.
Subtask 4.11 Develop Deliverables Management Plan Contractor will develop a Deliverables Management Plan in accordance with Sections	**Deliverable 4.11 Deliverables Management Plan** • Deliverables Management Plan.

Task 4 Complete Project Control Document	
9.3.2 (Key Deliverables) and 9.13 (Approval of Key Deliverables) of the Agreement. The Deliverables Management Plan must include the detailed process for initiation, development, review and Acceptance of Deliverables, including but not limited to: • Process for completing and Approving DEDs; • Identification of reviewers; • Deliverable Approval process for all Deliverables; • Status types for Deliverables; and • Process for tracking of Deliverables. Contractor will draft a Deliverables Management Plan and submit to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Deliverables Management Plan and submit a final version to County for Approval.	**Acceptance Criteria:** • Final Deliverables Management Plan incorporates, and is consistent with, County-provided input. • Final Deliverables Management Plan addresses all required elements described in subtask 4.11(Develop Deliverables Management Plan). • Final Deliverables Management Plan has been Approved by County.

Subtask 4.12: Develop Procedures for Status Meetings/Reporting
Contractor will develop procedures for Status Meetings in accordance with Section 10.2 (Reports and Meetings) of the Agreement. These procedures, at a minimum, will include the following:
• Listing of all standing Project meetings. At a minimum, the meetings must include weekly Status Meetings, quarterly Status Meetings, and Executive Project Updates;
• Guidelines for ad hoc meetings;
• Meeting modality and logistics;
• Contractor and County required participants;
• Meeting duration;
• Frequency of meeting;
• Format of the meeting agenda; and
• Meeting minute format, including:
  ○ Agenda;
  ○ Decisions;
  ○ Attendance log;
	Deliverable 4.12 Procedures for Status Meetings/Reporting
	• Procedures for Status Meetings/Reporting.
	
	Acceptance Criteria:
	• Final Procedures for Status Meetings/Reporting incorporate, and are consistent with, County-provided input.
	• Final Procedures for Status Meetings/Reporting address all required elements described in subtask 4.13 (Develop Procedures for Status Meetings/Reporting).
	• Final Procedures for Status Meetings/Reporting have been Approved by County.

Task 4 Complete Project Control Document	
○ Issues list; and ○ Action items list. Contractor will develop procedures for Status Reporting. These procedures, at a minimum, will address the following: • Listing of all status reports; • Guidelines for ad-hoc reports; • Status reporting format; • Reporting period; • Distribution date and time; and • Distribution groups. Contractor will draft Procedures for Status Meetings/Reporting and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the Procedures for Status Meetings/Reporting and submit a final version to County for Approval.	
Subtask 4.13: Develop Project Control Document Contractor will compile all Deliverables developed as part of Task 4 (Complete Project Control Document) in a comprehensive Project Control Document. The PCD must include all of the following: • Project Work Plan; • Error Management Plan; • Project Communications Strategy; • Risk Management Plan; • Project Staffing and Resource Management Plan; • Configuration and Technology Change Management Plan; • Issue Management Plan; • Project Change Management Plan; • Quality Management Plan; • Deliverables Management Plan; • Project Work Plan Management Document, and • Procedures for Status Meetings/Reporting. The Contractor will draft a PCD and submit to	**Deliverable 4.13 Project Control Document** • Project Control Document. **Acceptance Criteria:** • Final Project Control Document incorporates, and is consistent with, County-provided input. • Final Project Control Document addresses all required elements described in subtask 4.13 (Develop Project Control Document). • Final Project Control Document has been Approved by County. • Final Project Control Document completed and Approved prior to Project startup gateway.

Task 4 Complete Project Control Document	
County for feedback. The Contractor will incorporate County feedback and proposed changes into the PCD and submit a final version to County for Approval.	

Task 5 Develop Technology Strategy	
Task Description	
The purpose of the Technology Strategy is to identify and document the technical requirements for the EHR System, including end-user hardware devices, WAN and LAN requirements, as well as the domains and hosting strategy for the EHR System.	
Personnel Requirements	

• Contractor Key Resources
  ○ Technical Engagement Leader.
• County Key Resources
  ○ County Technical Manager;
  ○ County Desktop Technician;
  ○ County Network Technician;
  ○ County Peripherals Coordinator; and
  ○ County Biomed Technician.	

Subtasks/Deliverables	
Subtask 5.1 Conduct Technical Assessment Contractor will facilitate a session with County stakeholders to review the process for County to conduct an assessment of the County technical environment and determine County's readiness for the implementation of the EHR System. The session will include: • High-level overview of the Licensed Software and Third-Party Products; and • Technical walkthrough of the Licensed Software and Third-Party Products architecture. Contractor will support County in conducting data gathering and develop a draft Technical Assessment including current state analysis. Contractor will review and provide input and recommendations for future state needs. The Technical Assessment will include: • Current state technical environment; • Technical and infrastructure requirements at County facilities;	**Deliverable 5.1 Technical Assessment** • Technical Assessment. **Acceptance Criteria:** • Final Technical Assessment incorporates, and is consistent with, County-provided input. • Final Technical Assessment addresses all required elements described in subtask 5.1 (Conduct Technical Assessment). • Final Technical Assessment is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 5 Develop Technology Strategy	
• Gap between current and future state; • Risk analysis and mitigation; and • Technology recommendations with options for closing gaps. Contractor will support the Technical Assessment data collection process as follows: • Identify systemic issues related to completion of Technical Assessment data gathering (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to the address issues and recommendations above (the resources are to be as determined necessary to support the Project through the Governance process defined in this SOW. Contractor Technical Engagement Leader will be available for ad hoc calls and support by email. Immediate requests for support will be routed to another Contractor designee if the Contractor Technical Engagement Leader is unavailable. Contractor will facilitate a review session of the Technical Assessment with County and collect feedback and additional input as required to finalize the Technical Assessment. Contractor will incorporate County feedback and proposed changes into the Technical Assessment and submit a final version to County for Approval.	
Subtask 5.2 Develop Technology Strategy Based on the Technology Assessment, Contractor will provide input and recommendations for County to develop a Technology Strategy, which includes a representation of the required end-to-end technology components and hosting strategy to ensure a successful implementation of the Licensed Software for the EHR System. The Technology Strategy will describe the overall components of the infrastructure required on County premises including at a minimum: • Network and communication for connectivity to the Hosting Environment;	**Deliverable 5.2 Technology Strategy** • Input and recommendations into County Technology Strategy. **Acceptance Criteria:** • Recommendations into Technology Strategy incorporate, and are consistent with, County-provided input.

Task 5 Develop Technology Strategy	
• Servers required for disaster recovery or down time viewing; • Connectivity, routers, and concentrators for devices (including workstations and medical devices); and • Equipment and software required for cross-DHS communications and connectivity. Contractor will review the County developed Technology Strategy and provide written feedback and recommendations based on Contractor experience and industry Best Practices.	

Task 6 Develop Strategic Assessment and Organization Change Management Strategy	
Task Description	
Contractor will perform a Strategic Assessment using a diagnostic approach to assess County's culture and readiness for change. During this assessment, County leadership, end-users and prospective Project team members will be engaged by Contractor to assess the County's current state with respect to the implementation of a new EHR System, challenges and opportunities. Based in part on this Strategic Assessment, the Organizational Change Management Strategy ("**OCM Strategy**") will be finalized. The OCM Strategy describes the approach that will be taken to promote the successful initiation, planning, communication, implementation, and evaluation of change.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ Physician Champions; and
  ○ Change Management and Education Director.	

Subtasks/Deliverables	
Subtask 6.1 Conduct Strategic Assessment Contractor will facilitate a Strategic Assessment Session with County leadership, end-users, and prospective project team members. The Strategic Assessment Session must, at a minimum, address: • Overview of current County environment (including aspects such as clinical and operational process maturity, data quality,	**Deliverable 6.1 Strategic Assessment** • Strategic Assessment Session. • Strategic Assessment Report. **Acceptance Criteria:** • Approved documentation of the County's culture and readiness for change. • Final Strategic Assessment Report

Task 6 Develop Strategic Assessment and Organization Change Management Strategy	
prior success with technology implementation, ability to accomplish organizational change, technical environment); • Areas of strength; • Challenges; • Opportunities for change; and • Expected Project benefits. Following the Strategic Assessment Session, Contractor will draft a Strategic Assessment Report and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the Strategic Assessment Report and submit a final version to County for Approval.	incorporates, and is consistent with, County-provided input. • Final Strategic Assessment Report addresses all required elements described in Task 6.1 (Conduct Strategic Assessment). • Final Strategic Assessment Report is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.
Subtask 6.2 Develop Organization Change Management Strategy Based on the outcome of the Leading Strategic Change Workshops conducted by the Contractor as outlined in subtask 12.10 (Conduct Leading Strategic Change Workshop), Contractor will draft an OCM Strategy that, at a minimum, includes: • Data gathering processes and tools to assess current state County capabilities to enable effective change; • Resource requirements; • Recommended approach for the County to successfully manage organizational and cultural change; and • Contractor support for implementing the OCM Strategy (e.g., including OCM Strategy activities in MethodM). Contractor will facilitate a session with County stakeholders to review the draft OCM Strategy and document County input and feedback. Contractor will draft an OCM Strategy and submit to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the OCM Strategy and submit a final version to County for Approval.	**Deliverable 6.1 Organization Change Management Strategy** • OCM Strategy. **Acceptance Criteria:** • Final OCM Strategy incorporates, and is consistent with, County-provided input. • Final OCM Strategy addresses all required elements described in subtask 6.2 (Develop Organization Change Management Strategy). • Final OCM Strategy is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 7 Develop Knowledge Transfer Strategy	
Task Description	
The Knowledge Transfer Strategy documents Contractor's approach to knowledge transfer and the support that Contractor will provide throughout the Project to prepare County for deployment and post production support of the Licensed Software and Third-Party Products. The Knowledge Transfer Strategy will be developed in accordance with the Section 9.5 (Knowledge Transfer and Training) of the Agreement.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ Physician Champions; and
  ○ Change Management and Education Director.	

Subtasks/Deliverables	

Subtask 7.1 Develop Knowledge Transfer Strategy
Contractor will document a Knowledge Transfer Strategy that outlines each of the activities that together make up knowledge transfer for the Licensed Software, Third-Party Products and process changes. This includes at a minimum:
• Events to educate County on:
  ○ Leading strategic change;
  ○ System review;
  ○ Design review;
  ○ System validation;
  ○ Maintenance training; and
  ○ Trainer conversion.
• Relationships and interdependencies among events;
• Goals and expected outcomes;
• Coverage of all Domains, Venues and Locations;
• Coaching and mentoring approach between and beyond events; and
• Approach to develop County capabilities with regard to hand off to Contractor for Support Services and AMS Services.
	Deliverable 7.1 Knowledge Transfer Strategy
	• Knowledge Transfer Strategy.
	
	Acceptance Criteria:
	• Final Knowledge Transfer Strategy incorporates, and is consistent with, County-provided input.
	• Final Knowledge Transfer Strategy addresses all required elements described in Task 7.1 (Develop Knowledge Transfer Strategy).
	• Final Knowledge Transfer Strategy is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Contractor will draft a Knowledge Transfer Strategy and submit to County for review and feedback. Contractor will incorporate County feedback and proposed changes into the Knowledge Transfer Strategy and submit a final version to County for Approval.	

Task 8 Develop End-User Training Strategy	
Task Description	
The End-User Training Strategy documents the training requirements, the approach for development of training curricula, and the deployment of training for County's end users on the use of the Licensed Software and Third-Party Products. The End-User Training Strategy will be developed in accordance with Section 9.5 (Knowledge Transfer and Training) of the Agreement.	
Personnel Requirements	

• Contractor Key Resources
  ○ Learning Consultant.
• County Key Resources
  ○ County Education Coordinator; and
  ○ County Education and Learning Team.	

Subtasks/Deliverables	

Subtask 8.1 Develop End-User Training Strategy
Contractor will develop an End-User Training Strategy that, at a minimum, includes:
• Defined and documented categories of County users to be trained (end-users, super-users, etc.);
• Recommended approach for conducting end-user training (train the trainer, classroom, one-on-one, simulated environment, etc.);
• Learning tools; including:
  ○ ULearn;
  ○ LearningLive;
  ○ Standard WBT's; and
  ○ OpenHouse.
• Training methodologies and modalities;
• Contractor and County resources required; and
• Role for Contractor, County, and third-party resources.
	Deliverable 8.1 End-User Training Strategy
	• End-User Training Strategy.
	
	Acceptance Criteria:
	• Final End-User Training Strategy incorporates, and is consistent with, County-provided input.
	• Final End-User Training Strategy addresses all required elements described in subtask 8.1 (Develop End-User Training Strategy).
	• Final End-User Training Strategy is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 8 Develop End-User Training Strategy	
Contractor will develop a draft End-User Training Strategy and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the End-User Training Strategy and submit a final version to County for validation and Approval.	

Task 9 Develop Testing Strategy	
Task Description	
Provide a Testing Strategy that describes the approach and processes that will be used to fully test all components of the EHR System.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Manager;
  ○ Technical Engagement Leader;
  ○ Solution Architect; and
  ○ Integration Architect.
• County Key Resources
  ○ County Project Manager; and
  ○ IT Analysts.	

Subtasks/Deliverables	
Subtask 9.1 Develop Testing Strategy Contractor will document a Testing Strategy with County input and participation that, at a minimum, includes: • Identification of all tests (e.g. unit, system, integration, end-to-end, interface, medical device integration, user acceptance, data migration, performance (including stress and volume), regression, downtime procedures, and security), including a description of the purpose of each test and a high-level test schedule; • Tools, resources, and facilities required to support testing; • Artifacts that need to be created, such as scripts, test data, and scenarios; • Contractor and County roles and responsibilities; • Processes for Update, Revision, change, build,	**Deliverable 9.1 Testing Strategy** • Testing Strategy. **Acceptance Criteria:** • Final Testing Strategy incorporates, and is consistent with, County-provided input. • Final Testing Strategy addresses all required elements described in subtask 9.1 (Develop Testing Strategy). • Final Testing Strategy is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 9 Develop Testing Strategy	
and version control; and • Testing implications based on the County selected deployment or "Go-Live" approach. Contractor will develop a draft Testing Strategy and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the Testing Strategy and submit a final version to County for Approval.	

Task 10 Security Strategy	
Task Description	
The objective of the Security Strategy is to document the requirements, including physical, administrative and technical elements, and the divisions of security roles and responsibilities related to the EHR System. The Security Strategy will be developed in accordance with Exhibit K (Information Security Requirements) of the Agreement.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Manager;
  ○ Delivery Consultant;
  ○ Technical Engagement Leader; and
  ○ Solution Architect.
• County Key Resources
  ○ County Project Manager; and
  ○ IT Analysts.	

Subtasks/Deliverables	
Subtask 10.1 Develop Security Strategy Contractor will document a Security Strategy, with specifications in accordance with Exhibit K (Information Security Requirements) of the Agreement. The Security Strategy, at a minimum, must address: • Identification of applicable regulatory requirements; • Tools, testing, resources and facilities required to support security roles, management, access controls, user authorization and authentication, threat risk assessment, threat response, reporting, and audits; • Contractor and County roles and	**Deliverable 10.1 Security Strategy** • Security Strategy. **Acceptance Criteria:** • Final Security Strategy incorporates, and is consistent with, County-provided input; • Final Security Strategy addresses all required elements described in subtask 10.1 (Develop Security Strategy); • Final Security Strategy is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

responsibilities; • Portable device security precautions and procedures; and • Implications for the County-selected deployment or "Go-Live" approach. Contractor will develop a draft Security Strategy and submit to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the Security Strategy and submit a final version to County for Approval.	

Task 11 Conduct County Executive Session	
Task Description	
The objective of the County Executive Session is to achieve strategic, Project, and technical alignment between Contractor and County executive teams. This event also serves as the executive leadership kick off for the Project. The County Executive Session provides an opportunity to discuss and further define the goals and outcomes for the Project. These defined outcomes will guide the Project. The County Executive Session is an interactive session with knowledge transfer between County and Contractor leadership.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Resources
  ○ County Executive and Clinical Leadership Team; and
  ○ County Quality Director.	

Subtasks/Deliverables	
Subtask 11.1 Conduct County Executive Session Contractor will conduct a one (1) day County Executive Session with County executives, the agenda to include review of all Project Control Documents and strategies developed by Contractor to-date. The County Executive Session must provide an overview of: • Project governance; • Project organization; • Project Work Plan; • Quality Management Plan; • Communications Strategy; • OCM Strategy; • Security Strategy;	**Deliverable 11.1 County Executive Session** • Agenda/schedule for County Executive Session. • Attendance sheet/roster of participants for County Executive Session. • County Executive Session presentation materials. • County Executive Session Event Summary Report. **Acceptance Criteria**: • Final County Executive Session Event Summary Report incorporates, and is

Task 11 Conduct County Executive Session	
• Knowledge Transfer Strategy; and • End-User Training Strategy. During the County Executive Session, Contractor will provide an overview of the Project, including: • Identifying and documenting expected Project outcomes; • Creating understanding among County Executives of the Licensed Software and Services and key dates; • Outlining the Project approach and general timeline; • Discussing County's Meaningful Use objectives to be addressed on this Project; and • Discussing Project success and risk factors. The County Executive Session will also address the strategic alignment of the Project with the DHS strategic plan. This includes: • Clarifying County leadership's organizational vision, mission, goals, and outcomes; • Educating County leaders about the Project; • Encouraging County leadership's participation in the Project; and • Facilitating communication planning. During the County Executive Session, Contractor will document input from County stakeholders which will be incorporated into the County Executive Session Event Summary Report. Contractor will develop a draft County Executive Session Event Summary Report that includes findings (observations, opportunities, challenges) from the session. Contractor will provide recommendations regarding how to increase Project readiness as part of the County Executive Session Event Summary Report. Contractor will provide County with assistance and resources to implement the recommendations as needed. Contractor will submit County Executive Session Event Summary Report for County review and input. Contractor will review and incorporate County feedback and proposed changes into the	consistent with, County-provided input. • Executive Session addresses all required elements described in subtask 11.1 (Conduct County Executive Session). • Final County Executive Session Event Summary Report addresses all required elements described in subtask 11.1 (Conduct County Executive Session). • Final County Executive Session Event Summary Report has been Approved by County.

Task 11 Conduct County Executive Session	
Executive Session Event Summary Report and submit a final version to County for Approval.	

Task 12 Conduct Project Preparation Sessions	
Task Description	
The purpose of the Project Preparation Sessions is to assess County's basic computer skills and project management concepts/tools needed to run a successful EHR System implementation Project. County will be introduced to the Contractor Project team and learn County's role and others' role on the team. MethodM will be introduced, and County will learn the different events within the methodology. Project tools that will make the Project successful will be introduced and demonstrated. Contractor will provide County with the opportunity to have hands on experience working on the Licensed Software and Third-Party Products.	
Personnel Requirements	

• Contractor Key Resources
  ○ Entire Contractor Project Team - Key Leadership, Analysts, and Subject Matter Experts;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect
  ○ Contractor Delivery Consultants;
  ○ Clinical Strategist; and
  ○ Solution Architects.
• County Key Resources
  ○ Entire County Project Team – Key Leadership, Analysts, and Subject Matter Experts.	

Subtasks/ Deliverables	

Subtask 12.1 Conduct Project Management Workshop
Contractor will:
• Work with County to identify the appropriate audience for this event;
• Provide County with a roster of participants; and
• Conduct a Project Management Workshop.
During the Project Management Workshop, at a minimum, Contractor will:
• Review the following key concepts:
  ○ Recommendations for effectively managing the Project; and
  ○ Establishing benefits as the Project foundation.
• Review how Meaningful Use fits into the
	Deliverable 12.1 Project Management Workshop
	• Agenda/schedule for Project Management Workshop.
	• Attendance sheet/roster of participants for Project Management Workshop.
	• Project Management Workshop presentation materials.
	• Proficiency Assessment; and
	• Project Management Workshop Event Summary Report.
	
	Acceptance Criteria:
	• Project Management Workshop Event Summary Report has been Approved by County.

Task 12 Conduct Project Preparation Sessions	

Project;
• Review Project governance structure;
• Review the various components of MethodM;
• Review the roles and responsibilities of Project team members;
• Review managing, updating, and reporting of the Project Work Plan;
• Review of the Communication Strategy;
• Review Project risks/issue management processes; and
• Develop a Proficiency Assessment for all workshop participants to:
  ○ Assess the skills learned by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills presented during the course.
Upon completion of each Project Management Workshop, Contractor will:
• Develop a Project Management Workshop Event Summary Report that includes findings (observations, opportunities, challenges) from the Project Management Workshop; and
• Provide recommendations for increasing Project readiness and provide County with assistance and resources to implement the recommendations as needed.	

Subtask 12.2 Conduct Project Team Workshop Contractor will: • Work with County to identify the appropriate audience for this event; • Provide County with a roster of participants; and • Conduct Project Team Workshops. During the Project Team Workshop, at a minimum, Contractor will: • Introduce the Project team to various project roles/responsibilities, MethodM, and project	**Deliverable 12.2 Project Team Workshop** • Agenda/schedule for Project Team Workshop. • Attendance sheet/roster of participants for Project Team Workshop. • Project Team Workshop presentation materials. • Proficiency Assessment. • Project Team Workshop Event Summary Report.

Task 12 Conduct Project Preparation Sessions	

tools that will be used for the project.
• Address at a minimum:
  ○ Introduction to MethodM;
  ○ Presentation of key Project documents; and
  ○ Introduction to administrative tools.
• Introduce the Project team;
• Review Project benefits and Meaningful Use measures addressed by Project;
• Define Project roles and expectations;
• Outline Contractor implementation approach;
• Review Licensed Software, Third-Party Products, Services, and Key event dates; and
• Provide an overview of Project administration tools.
Upon completion of each Project Team Workshop, Contractor will:
• Develop a Project Team Workshop Event Summary Report that includes findings (observations, opportunities, challenges) from the session; and
• Provide recommendations for increasing Project readiness and provide County with assistance and resources to implement the recommendations as needed.
	Acceptance Criteria:
	• Project Team Workshop Event Summary Report has been Approved by County.

Subtask 12.3 Conduct PC Basics Course Contractor will: • Work with County to identify the appropriate audience for this event; • Provide County with a roster of participants; • Establish PC Basics Course learning objectives and proficiency measures; and • Conduct a PC Basics Course. During the PC Basics Course, at a minimum, Contractor will: • Provide County participants with a basic understanding of Windows, MS Word, and MS Excel skills, on versions to be specified by County. Upon completion of each PC Basics Course,	**Deliverable 12.3 PC Basics Course** • Agenda/schedule for PC Basics Course. • Attendance sheet/roster of participants for PC Basics Course. • PC Basics Course learning objectives. • PC Basics Course presentation materials. • PC Basics Course Event Summary Report, including results of the Proficiency Assessment. • Recommendations for addressing shortcomings. **Acceptance Criteria:** • PC Basics Course Event Summary Reports have been Approved by County.

Task 12 Conduct Project Preparation Sessions	

Contractor will:
• Develop a Proficiency Assessment for all workshop participants to:
  ○ Document the skills acquired by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills for the software covered by the course.
• Develop a PC Basics Course Event Summary Report; and
• Provide County with written recommendations on how to address shortcomings and deficiencies related to PC Basics Course skills.	

Subtask 12.4 Conduct Solution Build and Maintain Course As part of the Project preparation, Contractor will: • Work with County to identify the appropriate audience for this event; • Provide County with a roster of participants; • Conduct Solution Build and Maintain Courses for County Project team members who are closely involved with the Licensed Software build; and • As needed, Contractor will repeat the Solution Build and Maintain Courses throughout the duration of the Project. During the Solution Build and Maintain Courses, at a minimum, Contractor will: • Address design, build, maintenance and troubleshooting topics for the Licensed Software and Third-Party Products; • Provide training on the tools and methodologies used during design and build; and • Conduct various hands-on exercises providing participants with an opportunity to demonstrate skills during mini-build sessions. Upon completion of each Solution Build and	**Deliverable 12.4 Solution Build and Maintain Course** • Agenda/schedule for Solution Build and Maintain Course. • Attendance sheet/roster of participants for Solution Build and Maintain Course. • Solution Build and Maintain Course learning objectives. • Solution Build and Maintain Course presentation materials. • Solution Build and Maintain Course Event Summary Report, including results of the Proficiency Assessment. • Recommendations for addressing shortcomings. **Acceptance Criteria:** • County Approved Solution Build and Maintain Course Event Summary Report.

Task 12 Conduct Project Preparation Sessions	

Maintain Course, Contactor will:
• Develop a Proficiency Assessment for all course participants to:
  ○ Document the skills acquired by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills for the course.
• Develop a Solution Build and Maintain Course Event Summary Report that includes findings (observations, opportunities, challenges) from the session; and
• Provide recommendations for increasing Project readiness and provide County with assistance and resources to implement the recommendations as needed.	

Subtask 12.5 Conduct Solution and Tools Introduction Workshop
As part of the Project preparation, Contractor will:
• Work with County to identify the appropriate audience for this event;
• Provide County with a roster of participants; and
• Conduct the Solution and Tools Introduction Workshop.
During the Solution and Tools Introduction Workshop, at a minimum, Contractor will:
• Ensure that all Project team members have a basic understanding of necessary Contractor tools, including:
  ○ MethodM Online;
  ○ Solutions WBT's - The simulated solution environment that performs like the DHS system;
  ○ Cerner.com: Access to Contractor proprietary content and tools and solution documentation, service centers, and distribution packages; and
  ○ Bedrock tools.
After each Solution and Tools Introduction
	Deliverable 12.5. Solution and Tools Introduction Workshop
	• Agenda/schedule for Solution and Tools Introduction Workshop.
	• Attendance sheet/roster of participants for Solution and Tools Introduction Workshop.
	• Solution and Tools Introduction Workshop learning objectives.
	• Solution and Tools Introduction Workshop presentation materials.
	• Solution and Tools Introduction Workshop Event Summary Report.
	
	Acceptance Criteria:
	• Solution and Tools Introduction Workshop Event Summary Report has been Approved by County.

Task 12 Conduct Project Preparation Sessions	

Workshop, Contactor will:
• Develop a draft Solution and Tools Introduction Workshop Event Summary Report that includes findings (observations, opportunities, challenges) from the workshop;
• Develop a Proficiency Assessment for all workshop participants to:
  ○ Document the skills acquired by the County team;
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills for the course.
• Provide recommendations for increasing Project readiness and provide County with assistance and resources to implement the recommendations as needed.	

Subtask 12.6 Licensed Software and Third-Party Products Fundamentals Course Contractor will: • Work with County to identify the appropriate audience for this event; • Provide County with a roster of participants; and • Conduct Licensed Software and Third-Party Products Fundamentals Courses. During the Licensed Software and Third-Party Products Fundamentals Courses, at a minimum, Contractor will: • Provide hands-on exercises for County participants who are preparing to implement the Contractor Licensed Software and Third-Party Products; and • Review the technical architecture, terminology, and fundamental components of the Licensed Software and Third-Party Products. After each Licensed Software and Third Party Products Fundamentals Course, Contactor will: • Develop a Proficiency Assessment for all workshop participants to: ○ Assess the skills learned by the County	**Deliverable 12.6 Licensed Software and Third Party Products Fundamentals Course** • Agenda/schedule for Licensed Software and Third Party Products Fundamentals Course. • Attendance sheet/roster of participants for Licensed Software Fundamentals and Third Party Products Course, learning objectives, and presentation materials. • Licensed Software and Third Party Products Fundamentals Course Event Summary Report. **Acceptance Criteria:** • Licensed Software and Third Party Products Fundamentals Course Event Summary Report has been Approved by County.

Task 12 Conduct Project Preparation Sessions	
team; and ○ Ensure that the County Project team members have obtained the necessary knowledge and skills presented during the course. • Develop a Licensed Software and Third Party Products Fundamentals Course Event Summary Report that includes findings (observations, opportunities, challenges) from the course; and • Provide recommendations for increasing Project readiness and provide County with assistance and resources to implement the recommendations as needed.	

Task 12 Conduct Project Preparation Sessions	

Subtask 12.7 Conduct Clinical and Business Process Analysis Training
Contractor will:
• Work with County to identify the appropriate audience for this event;
• Provide County with a roster of participants; and
• Conduct training in clinical and business process analysis, improvements and design consulting for IT Analysts, Workgroup members and SMEs.
During the Clinical and Business Process Analysis Training, at a minimum, Contractor will:
• Provide training on Contractor's bedrock and MethodM implementation tools and Project management tools; and
• Provide instructions on how to discover, analyze, develop, implement, and assess clinical and business process improvements.
After each Clinical and Business Process Analysis Training, Contactor will:
• Develop a Proficiency Assessment for all workshop participants to:
  ○ Assess the skills learned by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills presented during the training.
• Develop a Clinical and Business Process Analysis Training Event Summary Report that includes findings (observations, opportunities, challenges) from the session; and
• Provide recommendations to increase Project readiness and support County with the implementation of the recommendations as needed.
	Deliverable 12.7 Clinical and Business Process Analysis Training
	• Agenda/schedule for Clinical and Business Process Analysis Training.
	• Clinical and Business Process Analysis Training.
	• Clinical and Business Process Analysis Training learning objectives, presentation materials, and an attendance sheet/roster of participants.
	• Clinical and Business Process Analysis Training Event Summary Reports.
	
	Acceptance Criteria:
	• Clinical and Business Process Analysis Training Event Summary Reports have been Approved by County.

Subtask 12.8 Conduct IT Analyst Prep Session As part of the Project kick-off and initiation, Contractor will:	**Deliverable 12.8 IT Analyst Prep Session** • Agenda/schedule for IT Analyst Prep Session. • IT Analyst Prep Session learning objectives,

Task 12 Conduct Project Preparation Sessions	

• Work with County to identify the appropriate audience for this event;
• Provide County with a roster of participants; and
• Conduct IT Analyst Prep Sessions with all Solution Architects and County IT Analysts from all Domains as needed.
During the IT Analyst Prep Session, at a minimum, Contractor will:
• Discuss, develop, and document cross-work stream integration/communication processes to ensure that there is a basis for coordination and communication among Solution Architects and IT Analysts across the various work streams of the Project;
• Review work effort that will be required for each Domain throughout the life of the Project so that the County Project team is better prepared for upcoming events and activities;
• Discuss the roles and responsibilities of the County Workgroup, including SMEs; and
• Provide training on workshop and data gathering session facilitation.
After each IT Analyst Prep Session, Contactor will:
• Develop a Proficiency Assessment for all workshop participants to:
  ○ Assess the skills learned by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills presented during the course.
• Develop an IT Analyst Prep Sessions Event Summary Report that includes findings (observations, opportunities, challenges) from the session
• Provide recommendations for the increase Project readiness and support County with the implementation of the recommendations as needed.
	presentation materials, and an attendance sheet/roster of participants.
	• IT Analyst Prep Session Event Summary Report.
	
	Acceptance Criteria:
	• IT Analyst Prep Session Event Summary Report has been Approved by County.

Task 12 Conduct Project Preparation Sessions	

Subtask 12.9 Conduct Physician and Nursing (Clinician) Sessions
During Project preparation, Contractor will:
• Work with County to identify the appropriate audience for this event covering all Domains, Venues, and Locations;
• Provide County with a roster of participants; and
• Conduct Physician and Nursing (Clinician) Sessions.
During each Physician and Nursing (Clinician) Session, at a minimum, Contractor will:
• Provide senior clinical staff with an understanding of the Project scope, the implementation approach, and expected Project outcomes; and
• Assist the County leadership team in developing a cohesive, shared vision of the Project and strategy for a successful engagement.
After each Physician and Nursing (Clinician) Sessions, Contactor will:
• Develop a proficiency assessment for all workshop participants to:
  ○ Assess the skills learned by the County team; and
  ○ Ensure that the County Project team members have obtained the necessary knowledge and skills presented during the session.
• Develop a Physician and Nursing (Clinician) Sessions Event Summary Report that includes findings (observations, opportunities, challenges) from the session; and
• Provide recommendations for the increase Project readiness and support County with the implementation of the recommendations as needed.
	Deliverable 12.9 Physician and Nursing (Clinician) Sessions
	• Agenda/schedule for Physician & Nursing (Clinician) Sessions.
	• Physician and Nursing (Clinician) Sessions learning objectives, presentation materials, and an attendance sheet/roster of participants.
	• Physician and Nursing (Clinician) Sessions.
	• Physician and Nursing (Clinician) Sessions Event Summary Reports.
	
	Acceptance Criteria:
	• Physician and Nursing (Clinician) Sessions Event Summary Reports have been Approved by County.

Subtask 12.10 Conduct Leading Strategic Change Workshop Contractor will: • Work with County to identify the appropriate	**Deliverable 12.10 Leading Strategic Change Workshop** • Agenda/schedule for Leading Strategic Change Workshop.

Task 12 Conduct Project Preparation Sessions	
audience for this event; • Provide County with a roster of participants; and • Conduct an initial, two-day Leading Strategic Change Workshop during Project initiation focused on assessing and improving the County's ability to create an organizational change campaign to influence behaviors and realize benefits. During each Leading Strategic Change Workshop, at a minimum, Contractor will: • Define and document effective change strategies; • Introduce County to processes of introducing and managing change in the County organization; • Assess and document the skills, tools, techniques, measurements, and processes contributing to County's success in managing change; • Identify and document a strategy to prepare end users for implementation of Contractor Licensed Software; • Document timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and • Update the: (a) Knowledge Transfer Strategy; (b) End-User Training Strategy; and (c) OCM Strategy with County's feedback from the Leading Strategic Change Workshop. After each Leading Strategic Change Workshop, Contactor will: • Develop a Leading Strategic Change Workshop Event Summary Report that includes findings (observations, opportunities, challenges) from the session; and • Provide recommendations for the increase Project readiness and support County with the implementation of the recommendations as needed.	• Attendance sheet/roster of participants for Leading Strategic Change Workshop. • Leading Strategic Change Workshop learning objectives. • Leading Strategic Change Workshop presentation materials. • Updated Knowledge Transfer Strategy. • Updated End-User Training Strategy. • Updated OCM Strategy. • Leading Strategic Change Workshop Event Summary Report. **Acceptance Criteria:** • Each Leading Strategic Change Workshop addresses all required elements described in subtask 12.10 (Conduct Leading Strategic Change Workshop). • Final Leading Strategic Change Workshop Event Summary report has been Approved by County.

Task 13 Conduct Project Kickoff	
Task Description	
Contractor will conduct a comprehensive introduction to the Project and hold a kickoff session at a County location to formally launch the Project. The kickoff is an opportunity for County executives and Project leadership to create enthusiasm for the Project. The kickoff is also an opportunity for County Project leaders and sponsors to create clarity as to the purpose for the Project and help stakeholders across Domains, Venues, and Locations to understand the benefits to be gained from the implementation of the Licensed Software. The Project Kickoff is one of several forums where the entire organization gathers to receive Project information. Topics at the kickoff will include project goals, overview, timeline, Project approach, and Project team roles.	
Personnel Requirements	

• Contractor Key Resources
  ○ Entire Project Team – Key Leadership, Analysts, and Subject Matter Experts;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect
  ○ Contractor Delivery Consultants;
  ○ Clinical Strategist; and
  ○ Solution Architects.
• County Key Resources
  ○ Entire Project Team – Key Leadership, Analysts, and Subject Matter Experts;	

Subtasks/Deliverables	

Subtask 13.1 Conduct Project Kickoff
County and Contractor will develop and discuss the approach, modality, format, and venue for the Project Kickoff.
Contractor will:
• Prepare an agenda and develop draft presentation materials for the Project Kickoff that include at a minimum:
  ○ Project goals, including alignment with County EHR strategy and Business Objectives;
  ○ Project overview;
  ○ Project timeline;
  ○ Project approach; and
  ○ Contractor and County Project team roles.
• Incorporate County feedback and recommendations and finalize the Project
	Deliverable 13.1 Project Kickoff
	• Agenda/schedule for Project Kickoff.
	• Attendance sheet/roster of participants for Project Kickoff.
	• Project Kickoff presentation materials.
	• Project Kickoff Event Summary Report.
	
	Acceptance Criteria:
	• Project Kickoff presentation and agenda addresses all required elements described in Task 13.1 (Conduct Project Kickoff).
	• Final Project Kickoff Event Summary Report incorporates, and is consistent with, County-provided input.
	• Project Kickoff presentation and agenda has been Approved by County.
	• Project Kickoff Event Summary Report has

Task 13 Conduct Project Kickoff	
Kickoff presentation materials; and • Conduct the Project Kickoff in collaboration with County Project leadership. Contractor will, in collaboration with County, hold the Project Kickoff. After the Project Kickoff, Contactor will: • Submit a draft Project Kickoff Event Summary Report for County review and input; • Review and incorporate County feedback and proposed changes into the Project Kickoff Event Summary Report; and • Submit a final Project Kickoff Event Summary Report to County for validation and Approval.	been Approved by County.

5.3. Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.3 (EHR Architecture and Hosting Services Statement Of Work)

to the

Electronic Health Records System and Services Agreement

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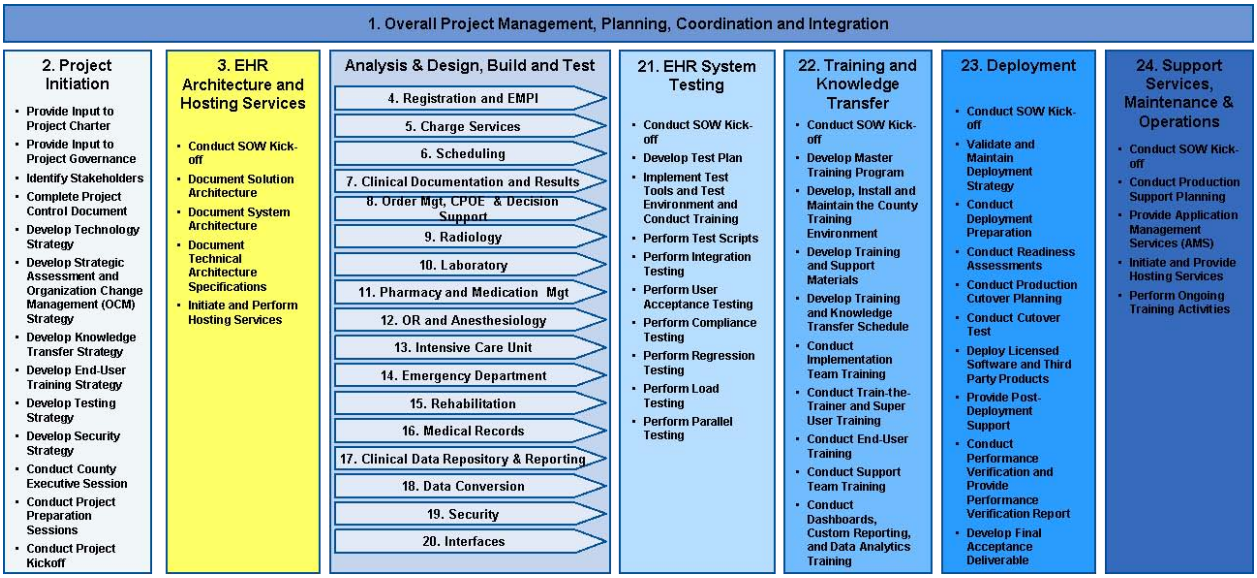
1. Introduction

This Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under this Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide for the solution, system, and technical architecture for all components of the Licensed Software as defined under the Agreement, and for the preparation, initiation, and performance of the Hosting Services Project Plan.

3. SOW Summary

3.1 Overview

This SOW addresses the architecture and Hosting Services required for successful completion of the Project. It describes the work plan and initiation session for this sub-project; documentation of the solution architecture, including the Licensed Software, Third-Party Products, and Hosting Software; documenting the system architecture necessary to meet the current environment, while planning for potential growth; documenting the technical architecture required to build, test, deploy, and maintain the Licensed Software; and development of a plan that identifies tasks, roles, and responsibilities for Hosting Services.

3.2 SOW Team Structure and Resources

Contractor will provide a recommended Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides for Deliverables which create the foundation for all SOWs, including this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – The Project timeline is too short to hide difficult messages. Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). This SOW is scheduled to be completed as indicated in the Project Work Plan, and upon Approval by the County Project Director of the Deliverables in this Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The detailed durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation of and conduct of monthly steering committee updates.

Contractor will perform this activity throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County EHR Architecture and Hosting Services SOW Lead**" or "**County SOW Lead**". The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule; and

(11) Participate in selected Project Status Meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Sub-Project Work Plan for EHR Architecture and Hosting Services	Deliverable 1.1 Sub-Project Work Plan for EHR Architecture and Hosting Services
Subtask 1.2 Initiation Session for EHR Architecture and Hosting Services Workgroup	Deliverable 1.2 EHR Architecture and Hosting Services Initiation Session (Key Deliverable)
Task 2: Document Solution Architecture	
Subtask 2.1 Document Solution Architecture	Deliverable 2.1 Solution Architecture
Task 3: Document System Architecture	
Subtask 3.1 Document System Architecture	Deliverable 3.1 System Architecture

Task/Subtask Name	Deliverables
Task 4 Document Technical Architecture	
Subtask 4.1 Document Technical Architecture	Deliverable 4.1 Technical Architecture
Task 5: Initiate and Perform Hosting Services	
Subtask 5.1 Prepare Hosting Services Project Plan	Deliverable 5.1 Remote Hosting Services Project Plan
Subtask 5.2 Initiate and Perform Remote Hosting Services for Design, Build, Test, Deployment, and Training	Deliverable 5.2 Remote Hosting Services for Design, Build, Test, Deployment, and Training (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor obligations, which shall be sub-tasks to each individual task. Contractor will:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverable Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for DEDs during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverables.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings), and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverables for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverables to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverables including, prior to distribution for Approval by County, validation by Contractor that the Deliverables conforms to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should

be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the Project Schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off	
Task Description	
The team members from Contractor, County, and external stakeholders will be introduced to the work ahead and their specific roles will be described. EHR Architecture and Hosting Services-specific training on the Licensed Software and Third-Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "County EHR Architecture and Hosting Services Workgroup" or "County Workgroup") and the County EHR Architecture and Hosting Services Workgroup will be introduced to Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer;
  ○ Contractor Technical Engagement Leader;
  ○ AMS Engagement Leader; and
  ○ Hosting Services Engagement Leader.
• County Key Resources
  ○ County Project Manager;
  ○ County EHR Architecture and Hosting Services Workgroup;
  ○ Technical Lead;
  ○ DHS CIO; and
  ○ Facility CIOs.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Work Plan for EHR Architecture and Hosting Services As part of the Project Control Document, Contractor will develop an overall Project Work Plan. The Project Work Plan will include an EHR Architecture and Hosting Services-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online compatible version of	**Deliverable 1.1 Sub-Project Work Plan for EHR Architecture and Hosting Services** • EHR Architecture and Hosting Services-specific section of Project Work Plan • Sub-Project Work Plan for EHR Architecture and Hosting Services

Task 1 Conduct SOW Kick-off	
Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Approval requirements for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the EHR Architecture and Hosting Services-specific section of the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) and subject to County Approval.	**Acceptance Criteria:** • The EHR Architecture and Hosting Services-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The EHR Architecture and Hosting Services-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Detailed Work Plan for EHR Architecture and Hosting Services). • The EHR Architecture and Hosting Services-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the EHR Architecture and Hosting Services-specific section of the Project Work Plan and sub-Project Work Plans are realistically achievable with reasonable effort as determined by County. • Elements of the EHR Architecture and Hosting Services-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Confirmed availability of Contractor resources required to create the architecture documentation and develop and implement the EHR Architecture and Hosting Services sub-Project Work Plan.
Subtask 1.2 Initiation Session for EHR Architecture and Hosting Services Workgroup Contractor will conduct an EHR Architecture and Hosting Services Initiation Session to provide and introduction to the County Workgroup to the Services covered by this Exhibit A.3 (Architecture Documentation and Hosting Services Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Before the Initiation Session, Contractor will: • Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW;	**Deliverable 1.2 EHR Architecture and Hosting Services Initiation Session** • Build EHR Architecture and Hosting Services Initiation Session materials for County review. • Report documenting EHR Architecture and Hosting Services SOW dependencies. • List of County Workgroup members who attended the EHR Architecture and Hosting Services Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • EHR Architecture and Hosting Services

Task 1 Conduct SOW Kick-off	

• Provide County with a roster of EHR Architecture and Hosting Services Initiation Session participants;
• Conduct a Project Management Workshop; and
• Develop an agenda/schedule for the EHR Architecture and Hosting Services Initiation Session.
 	
Contractor will conduct the EHR Architecture and Hosting Services Initiation Session as follows:
• Review and document Licensed Software, Modules, Domains, Venues, and Locations required for delivery of EHR Architecture and Hosting Services;
• Illustrate and document dependencies between this SOW and any other SOWs and Project work streams, including:
  ○ Requirements gathering and functional/technical specifications during System Review, Design Review, and System Validation;
  ○ Testing, including integration testing, peripheral device testing, and user acceptance testing;
  ○ Go-Live readiness assessment; and
  ○ Post-Go-Live assessment.
• Review tasks, Deliverables, and Milestones for the development of EHR Architecture and Hosting Services;
• Train the County Workgroup on the required process and tools used to support Contractor in conducting the current state assessment, purpose and expected outcome of the assessment, and related activities; and
• Provide the County Workgroup with an overview of MethodM including system and design review activities and data collection processes.
 	
After the EHR Architecture and Hosting Services Initiation Session, Contractor will prepare an EHR Architecture and Hosting Services Initiation Session Event Summary Report for review and
	Initiation Session Event Summary Report.
	• Agenda/Schedule for EHR Architecture and Hosting Services Initiation Session.
	• EHR Architecture and Hosting Services presentation materials.
	
	Acceptance Criteria:
	• The EHR Architecture and Hosting Services Initiation Session Event Summary Report from Contractor documenting that the EHR Architecture and Hosting Services Initiation Session (a) has been completed and (b) includes accurate documentation of the content, outcomes, and next steps agreed upon at the EHR Architecture and Hosting Services Initiation Session Event.
	• The EHR Architecture and Hosting Services Initiation Session Event Summary Report has been Approved by County.
	• Report documenting Architecture Documentation and Hosting Services Project Plan SOW dependencies addresses all elements described in subtask 1.2 (Initiation Session for EHR Architecture and Hosting Services Workgroup).
	• Report documenting EHR Architecture and Hosting Services SOW dependencies has been Approved by County.
	• Agreed upon and understood learning objectives for County Workgroup. Contractor evidence that County Workgroup has achieved stated learning objectives required for Project progression according to stated timelines.

Task 1 Conduct SOW Kick-off	
Approval by County.	

Task 2 Document Solution Architecture	
Task Description	
Contractor will identify, define, and document the Licensed Software, Third-Party Products, and Hosting Software solution architecture. Licensed Software solution architecture is defined as an architectural description of all Licensed Software, Third-Party Products, and Hosting Software solution components, including how they are built, the capabilities they provide, and how they Interface with each other and components outside the Licensed Software as described in the subtask below. This description must incorporate multiple architectural viewpoints, including business, information, and technical.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Resources
  ○ County Project Manager;
  ○ Technical Lead;
  ○ DHS CIO;
  ○ Facility CIOs; and
  ○ County Enterprise Architect.	

Subtask 2.1 Document Solution Architecture
Contractor will develop a solution architecture that includes:
• Business, information, and technical view of the Licensed Software, Third-Party Products, and Hosting Software including:
  ○ List and description of the functionality of Licensed Software Modules and Third-Party Products, and Hosting Software solution components;
  ○ Information flow across Licensed Software Modules and Third-Party Products, and Hosting Software;
  ○ Modality by which users and administrators will access the system;
  ○ Contractor list of certified devices for accessing Licensed Software Modules and
	Deliverable 2.1 Solution Architecture
	• Solution business architecture document and diagrams.
	• Solution information architecture document and diagrams.
	• Solution technical architecture document and diagrams.
	
	Acceptance Criteria:
	• County Approved solution architecture documentation.

Third-Party Products; and ○ Special architectural considerations such as: ▪ Storing and retrieving large media files; ▪ Large scale data transfer; and ▪ Down time infrastructure and architecture. ● Description of Licensed Software Interfaces with Integral Third-Party Software (if any),Third-Party Products, internal and external systems and components, and end-user and medical devices, whether hard wired, remote access, or mobile. This description will include identification of all clinical data access and entry devices, printers and other peripheral devices in accordance with the requirements of Exhibit A.20 (Interfaces Statement of Work). ● Validation of baseline metrics necessary for sizing Licensed Software solution, including: ○ Number of sites; ○ User base; ○ User device types and locations; and ○ Hardware and bandwidth capacity. Contractor will: ● Develop a draft Licensed Software solution architecture; ● Conduct a review session with County; ● Incorporate County feedback; and ● Submit a final version to County for Approval.	

Task 3 Document System Architecture
Task Description
Based on the solution architecture, Contractor will identify, define, and document system architecture specifications. The objective is to design a system architecture that meets current County environment while planning for potential growth and expansion requirements. The system architecture will identify and consider specific technology attributes, such as performance, availability, scalability, and integration when determining the best possible system solution.

Task 3 Document System Architecture	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Resources
  ○ County Project Manager; and
  ○ Technical Lead.	

Subtask 3.1 Document System Architecture Contractor will develop system architecture specifications that include: • Information and database architecture; • Application architecture, including 724 Downtime access architecture; • Network architecture; • Interface architecture; • Patient and provider portal architecture; • Network and system monitoring architecture; • Backup and disaster recovery architecture; and • Scalability and capacity planning during deployment and maintenance and operations taking into account County estimates for future expansion. Contractor will: • Develop draft system architecture specifications; • Conduct a review session with County; • Incorporate County feedback; and • Submit a final version to County for Approval.	**Deliverable 3.1 System Architecture** • System architecture document and diagram. **Acceptance Criteria:** • County-Approved system architecture documentation.

Task 4 Document Technical Architecture	
Task Description	
Contractor will document the technical architecture specifications for all hosted environments (e.g., development, test, training, staging, and production) required to build, test, deploy, and maintain the Licensed Software and train users. This will include the specifications for the technical infrastructure to support the Licensed Software, computing environment, and physical network as it relates to the EHR System.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader
 	
• County Key Resources
  ○ County Project Manager;
  ○ Technical Lead; and
  ○ County Enterprise Architect.	

Subtasks/ Deliverables	
Subtask 4.1 Document Technical Architecture Contractor will develop system architecture specifications that include: • Specifications for Contractor-hosted hardware; • Hardware and operating system specifications for County-owned or approved devices; • Requirements for rack space, network infrastructure, power, and physical environment to accommodate Contractor-owned equipment on County premises; and • Physical network and points of demarcation. Contractor will develop technical architecture document and submit to County for Approval.	**Deliverable 4.1 Technical Architecture** • Technical architecture document and diagram. **Acceptance Criteria:** • County-Approved technical architecture documentation.

Task 5 Initiate and Perform Remote Hosting Services
Task Description
Contractor will develop a Remote Hosting Services Plan. This plan will include tasks related to hosting computing services (operations and administration, remote access, database administration) and related support services. Roles and responsibilities related to these tasks will also be identified. Contractor will initiate and perform the tasks set forth in the Remote Hosting Services Plan.

Task 5 Initiate and Perform Remote Hosting Services	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer;
  ○ Contractor Technical Engagement Leader; and;
  ○ AMS Engagement Leader; and
 	
• County Key Resources
  ○ County Project Manager;
  ○ Technical Lead; and
  ○ County Help Desk Lead.	

Subtasks/ Deliverables	
Subtask 5.1 Develop Remote Hosting Services Plan Contractor will develop Remote Hosting Services Plan which covers the Project in accordance with the Agreement and Exhibit N (Required Remote Hosted Software Services Terms and Conditions) to the Agreement. The plan will address all tasks required to provide the Hosting Services to build, test, deploy, maintain, and operate and train end-users including: • Approach to determining, monitoring, and validating County capacity needs; • Roles and responsibilities of Contractor and County (e.g., operations and administration, remote access for County super users, database administration, etc.);Support Services for identification and resolution of Errors and for Hosting Error Correction; • Approach to building out the hosted environments during development, test, and deployment of the Licensed Software and Third-Party Products and the training of end-users, including a description of the function of each self-contained hosted environment and the expected timeframe of its availability to users; • Approach to building out the fail over and disaster recovery systems for the Licensed	**Deliverable 5.1 Remote Hosting Services Plan** • Draft Remote Hosting Services Plan. • Final Remote Hosting Services Plan. • Updated Remote Hosting Services Plan. **Acceptance Criteria:** • County Approved Remote Hosting Services Plan. • County Approved updates to Remote Hosting Services Plan.

Task 5 Initiate and Perform Remote Hosting Services	

Software and Third-Party Products;
• Process to test all hosted environments and associated fail over and 724 Downtime Viewer;
• Approach to maintaining the hosted environments current during the Term to respond to technological changes;
• Methodology for monitoring, measuring, and reporting the performance metrics and system accounting information corresponding to the Service Levels consistent with the requirements of subtask 4.7 (Service Level Monitoring and Reporting) of Exhibits A.25 (Deployment Statement of Work) and A.26 (Support Services, Maintenance and Operations Statement of Work);
• Hosting Services security architecture including:
  ○ Federal, State, and County mandated security requirements;
  ○ Contractor Hosting Services security policies;
  ○ HIPAA/HITECH requirements (privacy and security);
  ○ Physical security requirements; and
  ○ Other security requirements specified in Section 20 of the Agreement and Exhibit K (Information Security Requirements).
• County access to lights on network ("**LON**") for performance monitoring.
Contractor will:
• Develop draft Remote Hosting Services Plan;
• Conduct a review session with County during the System Management Workshop;
• Incorporate County feedback;
• Submit a final version to County for Approval;
• Review the Remote Hosting Services Plan after each Cluster deployment and provide County with written recommendations to	

Task 5 Initiate and Perform Remote Hosting Services	
enhance its effectiveness; and • Update Remote Hosting Services Plan after each deployment to accommodate County responses to Contractor's written recommendations.	
Subtask 5.2 Initiate and Perform Remote Hosting Services for Design, Build, Test Deployment, and Training Contractor will initiate and perform the tasks set forth in the Remote Hosting Services Plan and applicable SOWs necessary during all phases of the Project in accordance with the Agreement and Exhibit N (Required Remote Hosting Services Terms and Conditions), including: • Design and build; • Testing; and • Training.	**Deliverable 5.2 Remote Hosting Services for Design, Build, Test Deployment, and Training** • Hosting Services provided in accordance with the Remote Hosting Services Plan, the Agreement, and applicable SOWs. **Acceptance Criteria:** • As set forth in the Agreement and applicable SOWs.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement Of Work)

to the

Electronic Health Records System and Services Agreement

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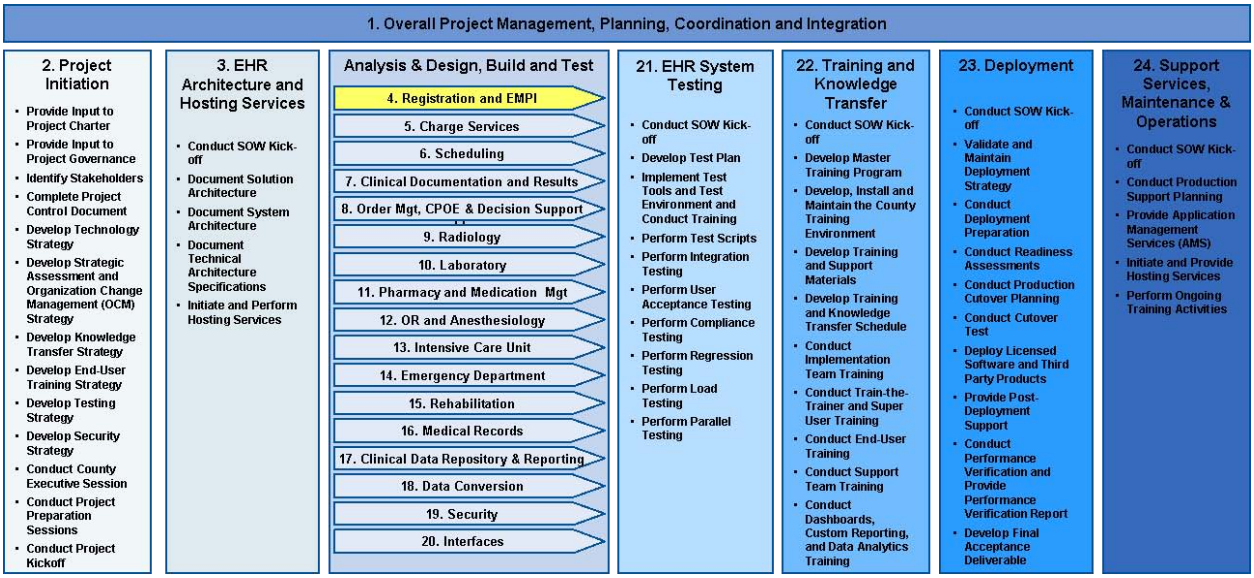
1. Introduction

This Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver registration and the Enterprise Master Patient Index ("EMPI") as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of registration and EMPI, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Access Management – Contractor Enterprise Master Person Index
- Access Management – Contractor Registration Management

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone)

Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Registration and Enterprise Master Patient Index (EMPI) SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Registration and Enterprise Master Patient Index (EMPI)	Deliverable 1.1 SOW Sub-Project Work Plan - Registration and Enterprise Master Patient Index (EMPI)
Subtask 1.2 Conduct Initiation Session for Registration and Enterprise Master Patient Index (EMPI) Workgroup	Deliverable 1.2 Registration and Enterprise Master Patient Index (EMPI) Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection

Tasks/Subtasks	Deliverables
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop	Deliverable 4.4 Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Registration and Enterprise Master Patient Index (EMPI)
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project

Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Registration and Enterprise Master Patient Index (EMPI)-specific training on the Licensed Software and Third Party Products will be provided for the County personnel

working on this SOW (referred to in this Exhibit as the "**County Registration and Enterprise Master Patient Index (EMPI) Workgroup**" or "**County Workgroup**") and the County Registration and Enterprise Master Patient Index (EMPI) Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.

Personnel Requirements

- Contractor Key Employees
  - Contractor Project Director;
  - Contractor Project Manager;
  - Registration and Enterprise Master Patient Index (EMPI) Architect;
  - Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  - Integration Architect; and
  - Clinical Strategist.
- County Key Employees
  - County Registration and Enterprise Master Patient Index (EMPI) SOW Lead;
  - County Registration and Enterprise Master Patient Index (EMPI) Workgroup;
  - County Transformation Lead;
  - County Registration and Enterprise Master Patient Index (EMPI) Analyst;
  - County Project Director;
  - County Project Manager; and
  - County Integration Architect.

Subtasks/Deliverables

Subtask 1.1 Develop Detailed Sub-Project Work Plan – Registration and Enterprise Master Patient Index (EMPI) As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Registration and Enterprise Master Patient Index (EMPI)-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable;	**Deliverable 1.1 Registration and Enterprise Master Patient Index (EMPI) Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Registration and Enterprise Master Patient Index (EMPI) specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Registration and Enterprise Master Patient Index (EMPI)-specific sub-Project Work Plan.

• County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for Registration and Enterprise Master Patient Index (EMPI) Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.4 (Registration and Enterprise Master Patient Index (EMPI) Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Registration and Enterprise Master Patient Index (EMPI) capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Registration and Enterprise Master Patient Index (EMPI) functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises.	**Deliverable 1.2 Registration and Enterprise Master Patient Index (EMPI) Initiation Session** • Registration and Enterprise Master Patient Index (EMPI) Initiation Session materials for County review one (1) week prior to the Registration and Enterprise Master Patient Index (EMPI) Initiation Session. • Initial list of County Domains, Venues and Locations for which Registration and Enterprise Master Patient Index (EMPI) capabilities must be delivered for review during Registration and Enterprise Master Patient Index (EMPI) Initiation Session. • Demonstration of Registration and Enterprise Master Patient Index (EMPI) functionality. • List of County Workgroup members who attended the Registration and Enterprise Master Patient Index (EMPI) Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Registration and Enterprise Master Patient Index (EMPI) Initiation Session and other County

• Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Registration and Enterprise Master Patient Index (EMPI) Initiation Session. • Registration and Enterprise Master Patient Index (EMPI) Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Registration and Enterprise Master Patient Index (EMPI) Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Registration and Enterprise Master Patient Index (EMPI) Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants.

exercises.
• Monitoring the use of WBTs, and review of MethodM Online.
• Providing telephone and e-mail support to County personnel.
• Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee.
• Supporting the County education coordinator in running Education Tracker Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	• Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County

	personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Lead;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Analyst;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Workgroup; and
  ○ County Registration and Enterprise Master Patient Index (EMPI) SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is

Task 2 Conduct Current State Assessment	
the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Registration and Enterprise Master Patient Index (EMPI) workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. At a minimum, the assessment must: • Distinguish between different registration processes (e.g., centralized vs. decentralized; quick registration vs. regular registration vs. disaster registration; inpatient vs. outpatient). • Identify the interrelationships between EMPI and Registration workflows, other clinical and administrative workflows (e.g., nursing, documentation, finance), and workflows that are external to DHS (e.g., external payers). • Identify staffing that supports existing workflows. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed.	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. • Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. • Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** • Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Task 2 Conduct Current State Assessment	
Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
 	
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software including use of relevant devices such as registration kiosks and other smart devices, using Best Practices, and capabilities provided by the Registration and Enterprise Master Patient Index (EMPI) components, the Contractor knowledge base, and expertise of Contractor SMEs.
 	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
 	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	
	• Recommendations for improved processes to manage Enterprise Master Patient Index (EMPI).
	
	• Documented County-Approved metrics to be utilized to determine success.
	
	• Recommendations for identifying implications with other workflows.
	
	• Recommendations for identifying industry best practices.
	
	• Documented risks.
	
	Acceptance Criteria:
	
	• County Approval of the Risk and Opportunities Documentation.
	
	• County acknowledgement that originally defined areas of workflow assessment have been accurately assessed.

Task 2 Conduct Current State Assessment	
	• Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Lead
  ○ County Registration and Enterprise Master Patient Index (EMPI) Analyst
  ○ County Registration and Enterprise Master Patient Index (EMPI) Workgroup
  ○ County Registration and Enterprise Master Patient Index (EMPI) SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation).

Task 3 Conduct System Review	
expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Registration and EMPI Demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Registration and Enterprise Master Patient Index (EMPI) Workgroup Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and	• List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Registration and Enterprise Master Patient Index (EMPI) Workgroup. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in

Task 3 Conduct System Review	

Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by
	the use of additional tools trained.
	• Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Registration and Enterprise Master Patient Index (EMPI) covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County Registration and Enterprise Master Patient Index (EMPI) SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Registration and Enterprise Master Patient Index (EMPI) process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Registration and Enterprise Master Patient Index (EMPI) process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Registration and Enterprise Master Patient Index (EMPI) processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary

Task 3 Conduct System Review	

quality of data collected if needed.
• Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Registration and Enterprise Master Patient Index (EMPI).
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	level of detail on schedule.
	• Contractor Delivery Consultant support through ad hoc calls and e-mails.
	• Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Lead Analyst;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Analyst; and
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session	**Deliverable 4.1**
The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant	• List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting

Task 4 Conduct Design Review	
solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Registration and Enterprise Master Patient Index (EMPI). • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Registration and Enterprise Master Patient Index (EMPI) and other related SOWs to date	interdependencies between Registration and Enterprise Master Patient Index (EMPI) workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Registration and Enterprise Master Patient Index (EMPI) data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after	

Task 4 Conduct Design Review	
the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Registration and Enterprise Master Patient Index (EMPI). • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Registration and Enterprise Master Patient Index (EMPI). • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues

Task 4 Conduct Design Review	
completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Registration and Enterprise Master Patient Index (EMPI)	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Registration and Enterprise Master Patient Index (EMPI) processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified

Task 4 Conduct Design Review	

workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Registration and Enterprise Master Patient Index (EMPI) processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Registration and Enterprise Master Patient Index (EMPI);
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions;
  ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures;
  ○ Recommendations for Registration and Enterprise Master Patient Index (EMPI) downtime and recovery strategies, including samples; and
  ○ Stop, Start, Continue recommendations
	benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Registration and Enterprise Master Patient Index (EMPI) downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that:
	  ○ All County patient care activities and services are addressed; and
	  ○ Realistic strategies for achieving Best Practice standards are delineated.
	• Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location.

Task 4 Conduct Design Review	
as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	• Suggested changes are achievable within County's resource constraints.
Subtask 4.4 Conduct Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop Contractor will conduct Registration and Enterprise Master Patient Index (EMPI) Workflow Workshops as needed in which the future state workflows for Registration and Enterprise Master Patient Index (EMPI) will be demonstrated to County and decisions required for the design of Registration and Enterprise Master Patient Index (EMPI) functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Registration and Enterprise Master Patient Index (EMPI). • Discuss the key decision points related to automation of capture and management of Registration and Enterprise Master Patient Index (EMPI).	**Deliverable 4.4 Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop** • Agenda/Schedule for Registration and Enterprise Master Patient Index (EMPI)Workflow Workshops. • Attendance sheet/roster of participants for Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop (agenda and presentation). • List of materials for Registration and Enterprise Master Patient Index (EMPI) Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback.

Task 4 Conduct Design Review	
• Document the key design decisions and desired outcomes related to Registration and Enterprise Master Patient Index (EMPI) in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Registration and Enterprise Master Patient Index (EMPI) in the DDMs. • Compare and contrast design elements for Registration and Enterprise Master Patient Index (EMPI) and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Registration and Enterprise Master Patient Index (EMPI) Domain. • At the end of the Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop, Contractor will draft and finalize the Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop Event Summary Report.	• Registration and Enterprise Master Patient Index (EMPI) Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Registration and Enterprise Master Patient Index (EMPI). **Acceptance Criteria:** • County-Approved Registration and Enterprise Master Patient Index (EMPI) Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions. • County-Approved updated downtime strategies for Registration and EMPI.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Registration and Enterprise Master Patient Index (EMPI) Licensed Software build based on the data collected and decisions made during the design review and workflow	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams.

Task 4 Conduct Design Review	
localization. The Registration and Enterprise Master Patient Index (EMPI) final Detailed Design Document shall include documentation on all design decisions, including: • List of all Domains, Venues, and Locations included in the Registration EMPI Final Design Document; • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Analyst; and

Task 5 Complete Initial Partial System Build	
○ County Registration and Enterprise Master Patient Index (EMPI) SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Registration and Enterprise Master Patient Index (EMPI) processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Registration and Enterprise Master Patient Index (EMPI). Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation
Task Description
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed,

Task 6 Conduct System Validation	
will produce an integrated solution that meets the needs of County Registration and Enterprise Master Patient Index (EMPI) and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Registration and Enterprise Master Patient Index (EMPI) Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Registration and Enterprise Master Patient Index (EMPI) Analyst;
  ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Workgroup; and
  ○ County Registration and Enterprise Master Patient Index (EMPI) SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts.	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Registration and Enterprise Master Patient Index (EMPI) Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes

Task 6 Conduct System Validation	
• Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Registration and Enterprise Master Patient Index (EMPI) reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Registration and Enterprise Master Patient Index (EMPI) Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs	accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
and DCWs. • Provide samples of Registration and Enterprise Master Patient Index (EMPI) Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Registration and Enterprise Master Patient Index (EMPI) Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing,

Task 6 Conduct System Validation	
• Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Registration and Enterprise Master Patient Index (EMPI) Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;

Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) and Conduct System and Unit Testing	
○ Contractor Integration Architect; and ○ Contractor Test Lead. • County Key Employees ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Registration and Enterprise Master Patient Index (EMPI); and ○ County Registration and Enterprise Master Patient Index (EMPI) SOW Workgroup.	
Subtasks/Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Registration and Enterprise Master Patient Index (EMPI) Licensed Software functionality and content until the full build of Registration and Enterprise Master Patient Index (EMPI) content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions.	**Deliverable 7.1 Complete System Build for Registration and Enterprise Master Patient Index (EMPI)** • Release Schedule. • Iterative releases of Registration and Enterprise Master Patient Index (EMPI) Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Registration and Enterprise Master Patient Index (EMPI) Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Registration and Enterprise Master Patient Index (EMPI) builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) and Conduct System and Unit Testing	
• Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Registration and Enterprise Master Patient Index (EMPI) Licensed Software has been fully configured to include all DDMs and DCWs related to Registration and Enterprise Master Patient Index (EMPI).	
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions. • Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online. • Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released. • Address identified Omissions as follows: ○ Document and verify the requirements to address the Omission in a consistent and	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log. • County validation that Approved changes to address Omissions fully address the documented omission specifications. • County-Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) and Conduct System and Unit Testing	
structured format; ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. ● Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. ● Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Registration and Enterprise Master Patient Index (EMPI) build as documented in the DCWs and DDMs is complete. Contractor will: ● Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. ● Release defect resolutions and implemented change requests as part of the build release cycles. ● Support County in re-testing resolved defects deployed by Contractor. ● Jointly decide with County through the governance process when the Registration	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** ● Documented results of completed and tested Registration and Enterprise Master Patient Index (EMPI) Licensed Software. ● List of resolved defects, including date of completion, retest results, and County Approval. ● County-Approved completed Unit and System Testing for Registration and Enterprise Master Patient Index (EMPI) Licensed Software. **Acceptance Criteria:** ● Resolution of all outstanding defects defined as required for Registration and Enterprise

Task 7 Complete Build of Registration and Enterprise Master Patient Index (EMPI) and Conduct System and Unit Testing	
and Enterprise Master Patient Index (EMPI) build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	Master Patient Index (EMPI) Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.5 (Charge Services Statement of Work)

to the

Electronic Health Records System and Services Agreement

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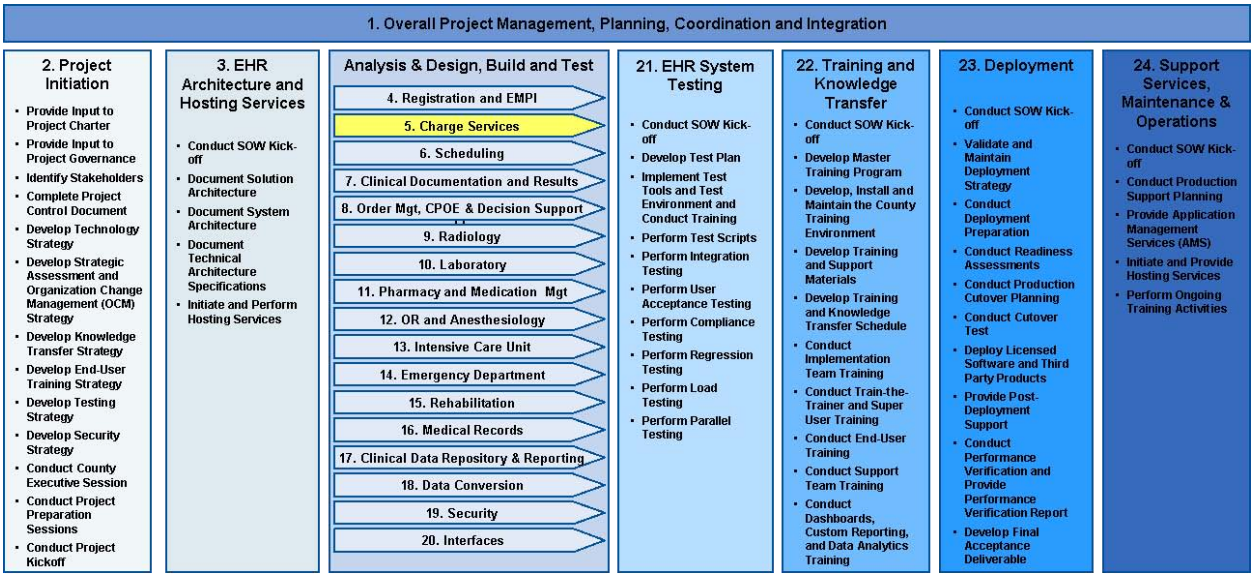
1. Introduction

This Exhibit A.5 (Charge Services Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.5 (Charge Services Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum. This is Exhibit A.5 (Charge Services Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c)

recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Charge Services as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Charge Services, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Charge Services

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.5 (Charge Services Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.5 (Charge Services Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in

writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the " **Contractor Charge Services Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Charge Services SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Charge Services	Deliverable 1.1 SOW Sub-Project Work Plan - Charge Services
Subtask 1.2 Conduct Initiation Session for Charge Services Workgroup	Deliverable 1.2 Charge Services Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Charge Services Workflow Workshop	Deliverable 4.4 Charge Services Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)

Tasks/Subtasks	Deliverables
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Charge Services Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Charge Services
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Charge Services-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Charge Services Workgroup**" or "**County Workgroup**") and the County Charge Services Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Charge Services Architect;
  ○ Contractor Charge Services Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Charge Services SOW Lead;
  ○ County Charge Services Workgroup;
  ○ County Transformation Lead;
  ○ County Charge Services Analyst;

○ County Project Director; ○ County Project Manager; and ○ County Integration Architect.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Charge Services As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Charge Services -specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.5 (Charge Services Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Charge Services Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Charge Services specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Charge Services-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Charge Services Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.5 (Charge Services Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues,	**Deliverable 1.2 Charge Services Initiation Session** • Charge Services Initiation Session materials for County review one (1) week prior to Charge Services Initiation Session. • Initial list of County Domains, Venues and Locations for which Charge Services capabilities must be delivered for review during Charge Services Initiation Session. • Demonstration of Charge Services functionality.

and Locations for which Charge Services capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Charge Services functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure	• List of County Workgroup members who attended the Charge Services Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Charge Services Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Charge Services Initiation Session. • Charge Services Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Charge Services Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Charge Services Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.

observable progress, or lack thereof, in using that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	• Weekly updates demonstrate that, on an ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements
• Contractor Key Employees ○ Contractor Charge Services Delivery Consultant;

Task 2 Conduct Current State Assessment	
○ Contractor Solution Architect; and ○ Contractor Clinical Strategist. ● County Key Employees ○ County Charge Services SOW Lead; ○ County Charge Services Analyst; ○ County Charge Services Workgroup; and ○ County Charge Services SMEs.	
Subtasks/Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** ● List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** ● List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. ● County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current charge capture and charge management workflow processes, the charge description master, and its usage (County-wide and facility or department-specific) at the minimum level necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool, and other charge management tools. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated.	**Deliverable 2.2 Workflow Assessment** ● Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County.

Task 2 Conduct Current State Assessment	
Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	**Acceptance Criteria:** • Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
 	
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Charge Services components, the Contractor knowledge base, and expertise of Contractor SMEs.
 	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
 	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	• Recommendations for improved processes to manage the charge capture.
	• Recommendations for charge master consolidation.
	• Documented County-Approved metrics to be utilized to determine success.
	• Recommendations for identifying implications with other workflows.
	• Recommendations for identifying industry best practices.
	• Documented risks.
	
	Acceptance Criteria:
	• County Approval of the Risk and

Task 2 Conduct Current State Assessment	
	Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Charge Services Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Charge Services SOW Lead
  ○ County Charge Services Workgroup
  ○ County Charge Services SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor.	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and

Task 3 Conduct System Review	
Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Charge Services demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Charge Services Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel	presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Charge Services. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps,

Task 3 Conduct System Review	

to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
	and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Charge Services covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
• Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County. Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice charge master process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice charge master process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the charge processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback

Task 3 Conduct System Review	

decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the charge processes.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document

Task 4 Conduct Design Review	
County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Charge Services Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Charge Services Lead Analyst; and
  ○ County Charge Services SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Charge Services workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers).

Task 4 Conduct Design Review	
decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Charge Services. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Charge Services and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials	**Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Charge Services data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	

Task 4 Conduct Design Review	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Charge Services. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Charge Services. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion.

Task 4 Conduct Design Review	
(on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	**Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Charge Services workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows. • Develop the following Deliverables: ○ Future State Workflow Diagrams covering the complete range of Charge Services processes impacted by the Licensed Software and with attention to	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Charge Services processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.

Task 4 Conduct Design Review	
interrelationships with other modules and other relevant systems; ○ A list and examples of policies and procedures that will need to be created or revised; ○ Processes for maintaining and updating the Charge Master; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Charge Services downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated	• Recommendations for Charge Services downtime strategies and documentation, including samples based on County build of Licensed Software. • Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Charge Services Workflow Workshop Contractor will conduct Charge Services Workflow Workshops as needed in which the future state workflows for Charge Services will be demonstrated to County and decisions required for the design of Charge Services functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Charge Services. • Discuss the key decision points related to automation of capture and management of Charge Services. • Document the key design decisions and desired outcomes related to Charge Services in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Charge Services in the DDMs. • Compare and contrast design elements for Charge Services and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are	**Deliverable 4.4 Charge Services Workflow Workshop** • Agenda/Schedule for Charge Services Workflow Workshops. • Attendance sheet/roster of participants for Charge Services Workshop (agenda and presentation). • List of materials for Charge Services Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Charge Services Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Charge Services. **Acceptance Criteria:** • County-Approved Charge Services Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
outstanding. • Refine and augment downtime strategy for Charge Services Domain. • At the end of the Charge Services Workflow Workshop, Contractor will draft and finalize the Charge Services Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Charge Services Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Charge Services final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;

Task 5 Complete Initial Partial System Build	
○ Contractor Charge Services Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect; • County Key Employees ○ County Charge Services SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Charge Services Analyst; and ○ County Charge Services SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and charge capture and management processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Charge Services. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and

Task 5 Complete Initial Partial System Build	
	DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Charge Services and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Charge Services Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Charge Services Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Charge Services SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Charge Services Analyst;
  ○ County Charge Services SOW Workgroup; and
  ○ County Charge Services SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Charge Services Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents.

Task 6 Conduct System Validation	
Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Charge Services reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Charge Services Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County.	**Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Charge Services Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Charge Services Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing,

Task 6 Conduct System Validation	
• Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Charge Services and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Charge Services Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.

Task 7 Complete Build of Charge Services and Conduct System and Unit Testing	

• County Key Employees
  ○ County Charge Services SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Charge Services Analyst; and
  ○ County Charge Services SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Charge Services Licensed Software functionality and content until the full build of Charge Services content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Charge Services Licensed Software has been fully configured	**Deliverable 7.1 Complete System Build for Charge Services** • Release Schedule. • Iterative releases of Charge Services Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Charge Services Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Charge Services builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Charge Services and Conduct System and Unit Testing	
to include all DDMs and DCWs related to Charge Services.	

Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests
As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have
	Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Charge Services and Conduct System and Unit Testing	
impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Charge Services build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Charge Services build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Charge Services Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Charge Services Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Charge Services Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain,

Task 7 Complete Build of Charge Services and Conduct System and Unit Testing	
	but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.6 (Scheduling Statement of Work)

to the

Electronic Health Records System and Services Agreement

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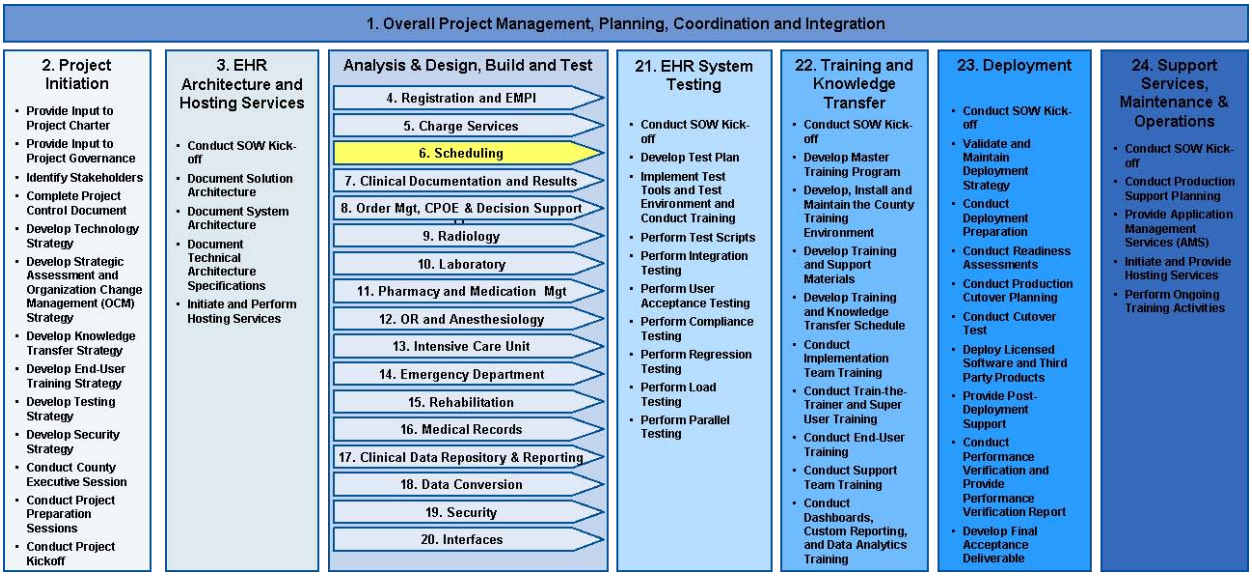
1. Introduction

This Exhibit A.6 (Scheduling Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.6 (Scheduling Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.6 (Scheduling Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver scheduling as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of scheduling functionality, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Scheduling Management
- Enhanced Medical Necessity Content (Acute Care or Ambulatory)

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a

fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined –Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.6 (Scheduling Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.6 (Scheduling Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific

Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Scheduling Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Scheduling SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Scheduling	Deliverable 1.1 SOW Sub-Project Work Plan - Scheduling
Subtask 1.2 Conduct Initiation Session for Scheduling Workgroup	Deliverable 1.2 Scheduling Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Scheduling Workflow Workshop	Deliverable 4.4 Scheduling Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)

Tasks/Subtasks	Deliverables
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Scheduling Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Scheduling
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off/Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Clinical Documentation and Results-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Scheduling Workgroup**" or "**County Workgroup**") and the County Scheduling Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Scheduling Architect;
  ○ Contractor Scheduling Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Scheduling SOW Lead;
  ○ County Scheduling Workgroup;
  ○ County Transformation Lead;
  ○ County Scheduling Analyst;

○ County Project Director; ○ County Project Manager; and ○ County Integration Architect	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Scheduling As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Scheduling-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.6 (Scheduling Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Scheduling Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Scheduling specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Scheduling-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Scheduling Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.6 (Scheduling Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Scheduling	**Deliverable 1.2 Scheduling Initiation Session** • Scheduling Initiation Session materials for County review one (1) week prior to Scheduling Initiation Session. • Initial list of County Domains, Venues and Locations for which Clinical Documentation and Results capabilities must be delivered for review during Scheduling Initiation Session. • Demonstration of Clinical Documentation and Results functionality. • List of County Workgroup members who

capabilities will be triggered and utilized within County (e.g., disciplines, departments, service lines, ambulatory, inpatient, appointment reminders, patient-driven vs. order-driven Scheduling, etc.) • Demonstrate Scheduling functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure	attended the Scheduling Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Scheduling Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Scheduling Initiation Session. • Scheduling Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Scheduling Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Scheduling Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County. • Weekly updates demonstrate that, on an

observable progress, or lack thereof, in using that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements
• Contractor Key Employees ○ Contractor Scheduling Delivery Consultant; ○ Contractor Solution Architect; and ○ Contractor Clinical Strategist.

Task 2 Conduct Current State Assessment	

• County Key Employees
  ○ County Scheduling SOW Lead;
  ○ County Scheduling Analyst;
  ○ County Scheduling Workgroup; and
  ○ County Scheduling SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Contractor will provide County with a recommended list of other SOWs that require Scheduling functionality. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.

Subtask 2.2 Conduct Workflow Assessment
In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Scheduling workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows.
Contractor will document the assessment in the template-based structured OWA tool.
Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated.
Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed (e.g., order management, clinical documentation,
	Deliverable 2.2 Workflow Assessment
	• Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to:
	  ○ Worksheets;
	  ○ Recommended workflows; and
	  ○ Key County requirements.
	• Documented interrelationships with other SOW workflows (e.g., order management, clinical documentation, registration) that need to be recognized and addressed.
	• Workflows documented in sufficient detail to permit Contractor to:
	  ○ Compare to Best Practices; and
	  ○ Identify risks and opportunities as determined by County.
	
	Acceptance Criteria:
	• Reviewed and finalized OWA posted on MethodM Online capturing the agreed

Task 2 Conduct Current State Assessment	
registration, and medical records). Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Scheduling components, the Contractor knowledge base, and expertise of Contractor SMEs.
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	• Recommendations for improved processes to manage Scheduling.
	• Recommendations for enterprise-wide Scheduling.
	• Recommendations for converting from current paper-based systems.
	• Documented County-Approved metrics to be utilized to determine success.
	• Recommendations for identifying implications with other workflows.
	• Recommendations for identifying industry best practices.
	• Documented risks.
	
	Acceptance Criteria:
	• County Approval of the Risk and Opportunities Documentation.

Task 2 Conduct Current State Assessment	
	• County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Scheduling Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ Contractor Project Manager;
  ○ County Integration Architect;
  ○ County Scheduling SOW Lead
  ○ County Scheduling Workgroup
  ○ County Scheduling SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System

Task 3 Conduct System Review	
expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Scheduling demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Conduct a Scheduling demonstration for patient-initiated and provider-initiated appointments. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Scheduling Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and	Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Scheduling. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.

Task 3 Conduct System Review	

Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Scheduling covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Scheduling process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Scheduling process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Scheduling processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback

Task 3 Conduct System Review	

decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on Scheduling.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document

Task 4 Conduct Design Review	
County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Scheduling Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Scheduling Lead Analyst; and
  ○ County Scheduling SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Scheduling workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers).

Task 4 Conduct Design Review	
Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Clinical Documentation and Results. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Scheduling and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs.	**Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Scheduling data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings.

Task 4 Conduct Design Review	
Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Scheduling. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project	• Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Scheduling. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs.

Task 4 Conduct Design Review	
Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	• County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.

Subtask 4.3 Conduct Workflow Localization
The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy.
Contractor will:
• Draft an agenda for meetings that will be held at County facilities and departments for review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between Scheduling workflow localization Deliverables and OWAs from other SOWs, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Scheduling processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems (e.g., eConsult, i2i);
  ○ A list and examples of policies and procedures that will need to be created or revised;
	Deliverable 4.3 Workflow Localization Documents
	• List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials).
	• Future State Workflow Diagrams covering the complete range of Scheduling processes impacted by the Licensed Software.
	• A list and examples of policies and procedures that will need to be created or revised.
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Scheduling downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to

Task 4 Conduct Design Review	
○ Processes for maintaining and updating Scheduling templates; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Scheduling downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the	what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
workflow localization Deliverables.	
Subtask 4.4 Conduct Scheduling Workflow Workshop Contractor will conduct Scheduling Workflow Workshops as needed in which the future state workflows for Scheduling will be demonstrated to County and decisions required for the design of Scheduling functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Scheduling. • Discuss the key decision points related to automation of capture and management of Clinical Documentation and Results. • Document the key design decisions and desired outcomes related to Scheduling in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Clinical Documentation and Results in the DDMs. • Compare and contrast design elements for Scheduling and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Scheduling Domain. • At the end of the Scheduling Workflow Workshop, Contractor will draft and finalize the Scheduling Workflow Workshop Event Summary Report.	**Deliverable 4.4 Scheduling Workflow Workshop** • Agenda/Schedule for Scheduling Workflow Workshops. • Attendance sheet/roster of participants for Scheduling Workflow Workshop (agenda and presentation). • List of materials for Scheduling Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Scheduling Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Scheduling. **Acceptance Criteria:** • County-Approved Scheduling Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Scheduling Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Scheduling final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Scheduling Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Scheduling SOW Lead;
  ○ County Project Director;

Task 5 Complete Initial Partial System Build	
○ County Project Manager; ○ County Scheduling Analyst; and ○ County Scheduling SOW Workgroup.	
Subtasks/Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines (e.g., departments, service lines, ambulatory, inpatient, appointment reminders, patient-driven vs. order-driven Scheduling), and Scheduling processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Scheduling. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Scheduling and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Scheduling Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Scheduling Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Scheduling SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Scheduling Analyst;
  ○ County Scheduling SOW Workgroup; and
  ○ County Scheduling SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Scheduling Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes

Task 6 Conduct System Validation	
and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Scheduling reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Scheduling Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Scheduling Unit and System Test scripts (including test script for	accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Scheduling Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live.

Task 6 Conduct System Validation	
development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Scheduling and Conduct System and Unit Testing	
Task Description	
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Scheduling Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Scheduling SOW Lead;
  ○ County Scheduling Analyst; and
  ○ County Scheduling SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Scheduling	**Deliverable 7.1 Complete System Build for Scheduling**

Task 7 Complete Build of Scheduling and Conduct System and Unit Testing	
Licensed Software functionality and content until the full build of Scheduling content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Scheduling Licensed Software has been fully configured to include all DDMs and DCWs related to Scheduling.	• Release Schedule. • Iterative releases of Scheduling Licensed Software content and functionality for Unit and System Testing. • Release nNotes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Scheduling Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Scheduling builds meet specifications as documented in the final Detailed Design Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will:	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and

Task 7 Complete Build of Scheduling and Conduct System and Unit Testing	

• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
  ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and
  ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released.
• Provide County with sample gateway criteria
	how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Scheduling and Conduct System and Unit Testing	
and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County Approved-gateway criteria.	

Subtask 7.3 Complete Unit and System Testing
Contractor will notify County once the Scheduling build as documented in the DCWs and DDMs is complete.
Contractor will:
• Provide updates on the status of defect resolution and implementation of County Approved change request on weekly calls.
• Release defect resolutions and implemented change requests as part of the build release cycles.
• Support County in re-testing resolved defects deployed by Contractor.
• Jointly decide with County through the governance process when the Scheduling build is ready for moving to Integration Testing, based on:
  ○ Completeness of functionality and content;
  ○ Severity of outstanding defects; and
  ○ Severity of outstanding change requests.
	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing
	• Documented results of completed and tested Scheduling Licensed Software.
	• List of resolved defects, including date of completion, retest results, and County Approval.
	• County-Approved completed Unit and System Testing for Scheduling Licensed Software.
	
	Acceptance Criteria:
	• Resolution of all outstanding defects defined as required for Scheduling Licensed Software Acceptance.
	• Licensed Software Build Completion Document provided by Contractor and Approved by County.
	• Gateway criteria have either been achieved or exceptions documented and Approved by Project governance.
	• All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.7 (Clinical Results and Documentation Statement of Work)

to the

Electronic Health Records System and Services Agreement

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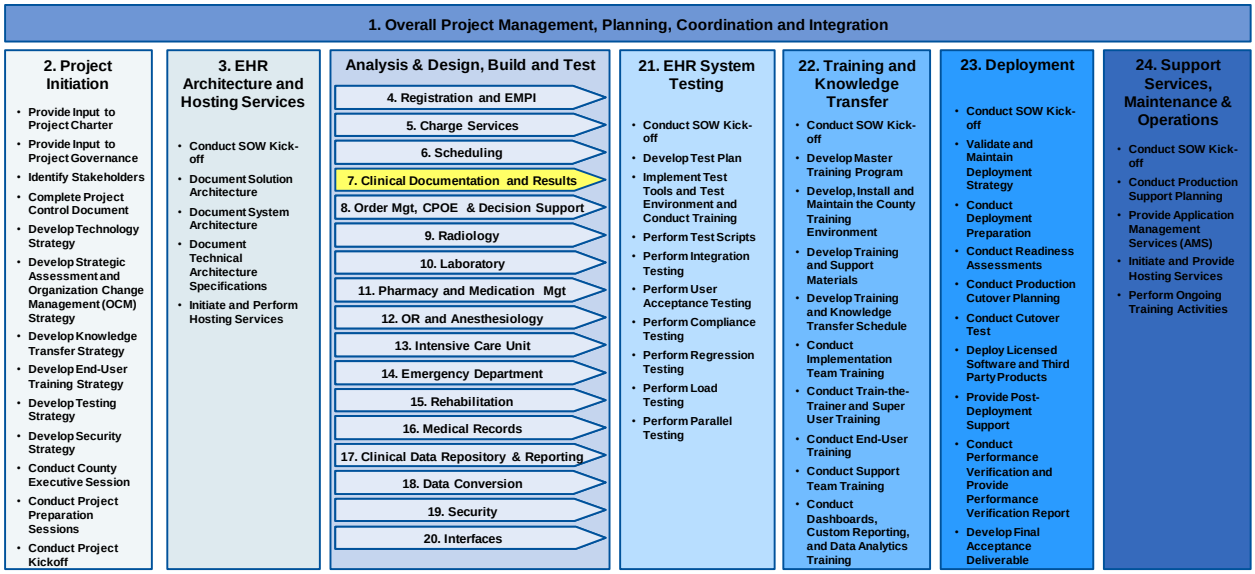
1. Introduction

This Exhibit A.7 (Clinical Documentation and Results Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.7 (Clinical Documentation and Results Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.7 (Clinical Documentation and Results Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Clinical Documentation and Results as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of clinical documentation, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Advanced Care Documentation
- PowerChart Ambulatory
- PowerPlan
- CareCompass
- Medication Administration Record

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.7 (Clinical Documentation and Results Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.7 (Clinical Documentation and Results).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Clinical Results and Documentation Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Clinical Documentation and Results SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Clinical Documentation and Results	Deliverable 1.1 SOW Sub-Project Work Plan - Clinical Documentation and Results
Subtask 1.2 Conduct Initiation Session for Clinical Documentation and Results Workgroup	Deliverable 1.2 Clinical Documentation and Results Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data	Deliverable 3.2 System Review Data Collection

Tasks/ Subtasks	Deliverables
Collection (System Review Follow-Up)	
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Clinical Documentation Workflow Workshop	Deliverable 4.4 Clinical Documentation Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Clinical Documentation and Results Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Clinical Documentation and Results
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project

Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Clinical Documentation and Results-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW

(referred to in this Exhibit as the "**County Clinical Documentation and Results Workgroup**" or "**County Workgroup**") and the County Clinical Documentation and Results Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Key Employees
  ○ Project Director
  ○ Project Manager
  ○ Clinical Documentation and Results Architect;
  ○ Contractor Clinical Results and Documentation Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Clinical Documentation and Results SOW Lead;
  ○ County Clinical Documentation and Results Workgroup;
  ○ County Transformation Lead;
  ○ County Clinical Documentation and Results Analyst;
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County Integration Architect.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Clinical Documentation and Results As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Clinical Documentation and Results-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and	**Deliverable 1.1 Clinical Documentation and Results Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Clinical Documentation and Results specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Clinical Documentation and Results-specific sub-Project Work Plan.

• Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.7 (Clinical Documentation and Results Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for Clinical Documentation and Results Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.7 (Clinical Documentation and Results Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Clinical Documentation and Results capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Clinical Documentation and Results functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits;	**Deliverable 1.2 Clinical Documentation and Results Initiation Session** • Clinical Documentation and Results Initiation Session materials for County review one (1) week prior to Clinical Documentation and Results Initiation Session. • Initial list of County Domains, Venues and Locations for which Clinical Documentation and Results capabilities must be delivered for review during Clinical Documentation and Results Initiation Session. • Demonstration of Clinical Documentation and Results functionality. • List of County Workgroup members who attended the Clinical Documentation and Results Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Clinical Documentation and Results Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Clinical Documentation and Results Initiation

(b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	Session. • Clinical Documentation and Results Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Clinical Documentation and Results Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Clinical Documentation and Results Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel.	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.

• Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee.
• Supporting the County education coordinator in running Education Tracker Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup

	readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Clinical Results and Documentation Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Clinical Documentation and Results SOW Lead;
  ○ County Clinical Documentation and Results Analyst;
  ○ County Clinical Documentation and Results Workgroup; and
  ○ County Clinical Documentation and Results SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.

Task 2 Conduct Current State Assessment	
regarding scheduling.	

Subtask 2.2 Conduct Workflow Assessment
In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Clinical Documentation and Results workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows.
Contractor will document the assessment in the template-based structured OWA tool.
Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated.
Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed.
Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy.
County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.
	Deliverable 2.2 Workflow Assessment
	• Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to:
	  ○ Worksheets;
	  ○ Recommended workflows; and
	  ○ Key County requirements.
	• Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed.
	• Workflows documented in sufficient detail to permit Contractor to:
	  ○ Compare to Best Practices; and
	  ○ Identify risks and opportunities as determined by County.
	
	Acceptance Criteria:
	• Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail.
	• County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Clinical Documentation and Results components, the Contractor knowledge base, and expertise of	**Deliverable 2.3 Risk and Opportunities Documentation** • Workflow assessment report including completed OWA tool and identified risks and opportunities report. • Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:

Task 2 Conduct Current State Assessment	
Contractor SMEs. Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation. Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.	○ Efficiency; ○ Patient safety; ○ Quality of care; and ○ Patient experience. • Recommendations for improved processes to manage Clinical Documentation and Results. • Documented County-Approved metrics to be utilized to determine success. • Recommendations for identifying implications with other workflows. • Recommendations for identifying industry best practices. • Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements
• Contractor Key Employees ○ Contractor Clinical Results and Documentation Delivery Consultant; ○ Contractor Project Director

Task 3 Conduct System Review	
○ Contractor Project Manager ○ Contractor Clinical Strategist; ○ Contractor Integration Architect; and ○ Contractor Solution Architect. • County Key Employees ○ County Project Director; ○ County Project Manager ○ County Integration Architect; ○ County Clinical Documentation and Results SOW Lead ○ County Clinical Documentation and Results Workgroup ○ County Clinical Documentation and Results SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	
Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Clinical Documentation and Results demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process.	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Clinical Documentation and Results. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all

Task 3 Conduct System Review	
• Conduct a review of the Clinical Documentation and Results Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design. • Work with the County Workgroup to begin the initial population of the DCWs. • Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently. • Work with the County Workgroup and	participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda. • County-Approved System Review Session Event Summary Report. • Demonstration of Clinical Documentation and Results covers all relevant County Domains, Venues, and Locations. • Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW. • Approved assignments for Contactor and

Task 3 Conduct System Review	

County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for data collection and completion of design documents with County .
Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.
	County to remediate any deficiencies identified in the System Review Session.

Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs.

Task 3 Conduct System Review	
and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Clinical Documentation and Results process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Clinical Documentation and Results. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the	• Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Clinical Documentation and Results process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Clinical Documentation and Results processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM and DCWs. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). **Acceptance Criteria:** • Contractor's assistance in completing DDMs

Task 3 Conduct System Review	

Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Results and Documentation Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Clinical Documentation and Results Lead Analyst; and
  ○ County Clinical Documentation and Results SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session	**Deliverable 4.1**
The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a	• List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs.

Task 4 Conduct Design Review	
detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will:	• Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Clinical Documentation and Results workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and

Task 4 Conduct Design Review	
• Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Clinical Documentation and Results. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Clinical Documentation and Results and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate,	design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Clinical Documentation and Results data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on

Task 4 Conduct Design Review	
progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Clinical Documentation and Results. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Clinical Documentation and Results. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Clinical Documentation

Task 4 Conduct Design Review	

strategy.
Contractor will:
• Draft an agenda for meetings that will be held at County facilities and departments for review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between Clinical Documentation and Results workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Clinical Documentation and Results processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Clinical Documentation and Results;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job
	and Results processes impacted by the Licensed Software.
	• A list and examples of policies and procedures that will need to be created or revised.
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Clinical Documentation and Results downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all components of Subtask 4.3 (Conduct

Task 4 Conduct Design Review	
descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Clinical Documentation and Results downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.
Subtask 4.4 Conduct Clinical Documentation Workflow Workshop Contractor will conduct Clinical Documentation and Results Workflow Workshops as needed in which the future state workflows for Clinical Documentation and Results will be demonstrated to County and decisions required for the design of Clinical Documentation and Results functionality will be made.	**Deliverable 4.4 Clinical Documentation Workflow Workshop** • Agenda/Schedule for Clinical Documentation and Results Workflow Workshops. • Attendance sheet/roster of participants for Clinical Documentation and Results Workflow Workshop (agenda and presentation). • List of materials for Clinical Documentation and Results Workshop (agenda and

Task 4 Conduct Design Review	
During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Clinical Documentation and Results. • Discuss the key decision points related to automation of capture and management of Clinical Documentation and Results. • Document the key design decisions and desired outcomes related to Clinical Documentation and Results in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Clinical Documentation and Results in the DDMs. • Compare and contrast design elements for Clinical Documentation and Results and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Clinical Documentation and Results Domain. • At the end of the Clinical Documentation and Results Workflow Workshop, Contractor will draft and finalize the Clinical Documentation and Results Workflow Workshop Event Summary Report.	presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Clinical Documentation and Results Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Clinical Documentation and Results. **Acceptance Criteria:** • County-Approved Clinical Documentation and Results Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Clinical Documentation and Results Licensed Software build based on the	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM.

Task 4 Conduct Design Review	
data collected and decisions made during the design review and workflow localization. The Clinical Documentation and Results final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	• Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contactor Clinical Results and Documentation Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Clinical Documentation and Results SOW Lead;
  ○ County Project Director
  ○ County Project Manager
  ○ County Clinical Documentation and Results Analyst; and
  ○ County Clinical Documentation and Results SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools**

Task 5 Complete Initial Partial System Build	
the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Clinical Documentation and Results processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Clinical Documentation and Results. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation
Task Description
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Clinical Documentation and Results and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Clinical Documentation and Results Licensed Software.

Task 6 Conduct System Validation	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Clinical Results and Documentation Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Clinical Documentation and Results SOW Lead;
  ○ County Project Director
  ○ County Project Manager
  ○ County Clinical Documentation and Results Analyst;
  ○ County Clinical Documentation and Results SOW Workgroup; and
  ○ County Clinical Documentation and Results SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup.	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Clinical Documentation and Results Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has

Task 6 Conduct System Validation	
• Validate database build to date of System Validation Session. • Validate proposed Clinical Documentation and Results reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Clinical Documentation and Results Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Clinical Documentation and Results Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document	provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Clinical Documentation and Results Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live.

Task 6 Conduct System Validation	
• Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Results and Documentation Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Clinical Documentation and Results SOW Lead;
  ○ County Project Director
  ○ County Project Manager
  ○ County Clinical Documentation and Results Analyst; and
  ○ County Clinical Documentation and Results SOW Workgroup.

Task 7 Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing	
Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Clinical Documentation and Results Licensed Software functionality and content until the full build of Clinical Documentation and Results content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Clinical Documentation and Results Licensed Software has been fully configured to include all DDMs and DCWs related to Clinical Documentation and Results.	**Deliverable 7.1 Complete System Build for Clinical Documentation and Results** • Release Schedule. • Iterative releases of Clinical Documentation and Results Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Clinical Documentation and Results Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Clinical Documentation and Results builds meet specifications as documented in the final Detailed Design Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests**

Task 7 Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing	

As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
  ○ Contractor and County will jointly
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and o Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Clinical Documentation and Results build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Clinical Documentation and Results build is ready for moving to Integration Testing, based on: o Completeness of functionality and content; o Severity of outstanding defects; and o Severity of outstanding change requests.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Clinical Documentation and Results Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Clinical Documentation and Results Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Clinical Documentation and Results Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and

Task 7 Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing	
	documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work)

to the

Electronic Health Records System and Services Agreement

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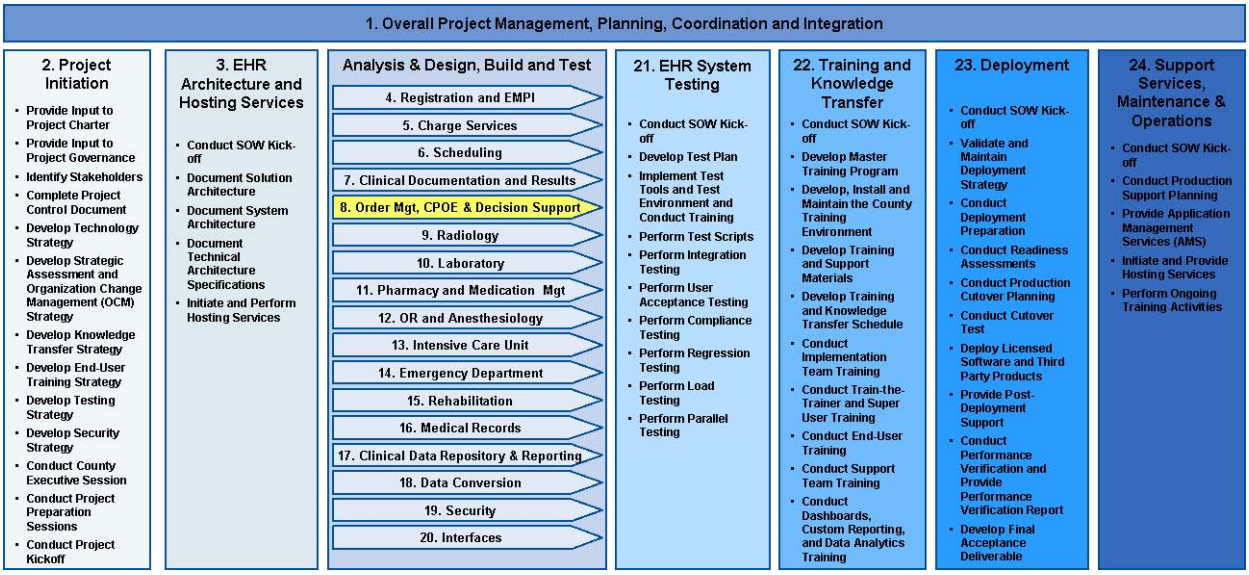
1. Introduction

This Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Order Management, CPOE, and Decision Support as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of clinical documentation, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Cerner Order Management
- PowerOrders
- Clinical Data Repository
- PowerNote
- Clinical Office PowerNote
- Discern Expert

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and

- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Order Management, CPOE, and Decision Support Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Order Management, CPOE, and Decision Support SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County

personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Order Management, CPOE, and Decision Support	Deliverable 1.1 SOW Sub-Project Work Plan - Order Management, CPOE, and Decision Support
Subtask 1.2 Conduct Initiation Session for Order Management, CPOE, and Decision Support Workgroup	Deliverable 1.2 Order Management, CPOE, and Decision Support Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation

Tasks/ Subtasks	Deliverables
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Order Management, CPOE, and Decision Support Workflow Workshop	Deliverable 4.4 Order Management, CPOE, and Decision Support Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Order Management, CPOE, and Decision Support Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Order Management, CPOE, and Decision Support
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization	
Task Description	
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Order Management, CPOE, and Decision Support-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Order Management, CPOE, and Decision Support Workgroup**" or "**County Workgroup**") and the County Order Management, CPOE, and Decision Support Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Order Management, CPOE, and Decision Support Architect;
  ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Order Management, CPOE, and Decision Support SOW Lead;
  ○ County Order Management, CPOE, and Decision Support Workgroup;
  ○ County Transformation Lead;
  ○ County Order Management, CPOE, and Decision Support Analyst;
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County Integration Architect.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Order Management, CPOE, and Decision Support As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include an Order Management, CPOE, and Decision Support-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks;	**Deliverable 1.1 Order Management, CPOE, and Decision Support Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Order Management, CPOE, and Decision Support specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent

• Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work) and subject to County Approval**.**	with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Order Management, CPOE, and Decision Support-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Order Management, CPOE, and Decision Support Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.8 (Order Management, Computerized Order Entry (CPOE), and Decision Support Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Order Management, CPOE, and Decision Support capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Order Management, CPOE, and Decision Support functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use	**Deliverable 1.2 Order Management, CPOE, and Decision Support Initiation Session** • Order Management, CPOE, and Decision Support Initiation Session materials for County review one (1) week prior to Order Management, CPOE, and Decision Support Initiation Session. • Initial list of County Domains, Venues and Locations for which Order Management, CPOE, and Decision Support capabilities must be delivered for review during Order Management, CPOE, and Decision Support Initiation Session. • Demonstration of Order Management, CPOE, and Decision Support functionality. • List of County Workgroup members who attended the Order Management, CPOE, and Decision Support Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan.

of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	• An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Order Management, CPOE, and Decision Support Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Order Management, CPOE, and Decision Support Initiation Session. • Order Management, CPOE, and Decision Support Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Order Management, CPOE, and Decision Support Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises

Subsequent to the Order Management, CPOE, and Decision Support Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including:
• Providing scripts for use by the County Workgroup for training/education exercises.
• Monitoring the use of WBTs, and review of MethodM Online.
• Providing telephone and e-mail support to County personnel.
• Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee.
• Supporting the County education coordinator in running Education Tracker Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the
	• Open House Domain scripts.
	• Progress Report on comprehension exercises.
	• Education Tracker demonstrates successful completion of all learning objectives by all County participants.
	• Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including

Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Order Management, CPOE, and Decision Support SOW Lead;
  ○ County Order Management, CPOE, and Decision Support Analyst;
  ○ County Order Management, CPOE, and Decision Support Workgroup; and
  ○ County Order Management, CPOE, and Decision Support SMEs.

Task 2 Conduct Current State Assessment	
Subtasks/Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Order Management, CPOE, and Decision Support workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. • Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. • Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** • Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Task 2 Conduct Current State Assessment	
and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Order Management, CPOE, and Decision Support components, the Contractor knowledge base, and expertise of Contractor SMEs.
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	• Recommendations for improved processes to manage Order Management, CPOE, and Decision Support.
	• Documented County-Approved metrics to be utilized to determine success.
	• Recommendations for identifying implications with other workflows (e.g. Registration Medical Records).
	• Recommendations for interdisciplinary communication.
	• Recommended principles for discipline-specific user Interface and screen flows.
	• Recommendations for identifying industry best practices.
	• Documented risks.
	
	Acceptance Criteria:
	• County Approval of the Risk and Opportunities Documentation.
	• County acknowledgement that originally

Task 2 Conduct Current State Assessment	
	defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Order Management, CPOE, and Decision Support SOW Lead
  ○ County Order Management, CPOE, and Decision Support Workgroup
  ○ County Order Management, CPOE, and Decision Support SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation).

Task 3 Conduct System Review	
will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Order Management, CPOE, and Decision Support demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Conduct the order set workshop to finalize order set design, review the order set approval process, begin populating data collection tools, and finalize the order set build timeline. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Order Management, CPOE, and Decision Support Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted	• List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Order Management, CPOE, and Decision Support. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained.

Task 3 Conduct System Review	

materials to the County SOW Lead.
• Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved.
• Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up
	• Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Order Management, CPOE, and Decision Support covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
items; ○ Tasks from the Project Work Plan for specific solution; ○ Assessment of County's ability to complete the remaining data collection and design decisions; and ○ Report on the status of education by County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County. Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Order Management, CPOE, and Decision Support process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion.	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Order Management, CPOE, and Decision Support process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Order Management, CPOE, and Decision Support

Task 3 Conduct System Review	

• Facilitate on-site weekly meetings to discuss issues.
• Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed.
• Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Order Management, CPOE, and Decision Support.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan;
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate;
	processes.
	• Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule.
	• Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule.
	• Contractor Delivery Consultant support through ad hoc calls and e-mails.
	• Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 3 Conduct System Review	
and ○ Identify outstanding requirements and constraints from other workgroups (e.g., orders and alerts established by the lab, radiology, pharmacy) ● Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.	

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	
● Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect ● County Key Employees ○ County Project Director; ○ County Project Manager; ○ County Order Management, CPOE, and Decision Support Lead Analyst; and ○ County Order Management, CPOE, and Decision Support SOW Workgroup.	
Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their	**Deliverable 4.1** ● List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). ● Completed and Contractor-confirmed DCWs. ● Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. ● Updated versions of the DDM and DCWs based on design review feedback. ● Design Review Session Event Summary

Task 4 Conduct Design Review	
completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions that were made according to the predefined order set approval process and the interdisciplinary workgroup review process documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Order	Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Order Management, CPOE, and Decision Support workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of

Task 4 Conduct Design Review	
Management, CPOE, and Decision Support. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Order Management, CPOE, and Decision Support and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County.	documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Manage and maintain a documented record of the Order Management, CPOE, and Decision Support data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM

Task 4 Conduct Design Review	
analysis completed. • Review relevant cross-SOW implications for Order Management, CPOE, and Decision Support. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	and DCWs. • Documented cross-SOW implications for Order Management, CPOE, and Decision Support. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Order Management, CPOE,

Task 4 Conduct Design Review	

strategy.
Contractor will:
• Draft an agenda for meetings that will be held at County facilities and departments for review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between Order Management, CPOE, and Decision Support workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Order Management, CPOE, and Decision Support processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Order Management, CPOE, and Decision Support;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job
	and Decision Support processes impacted by the Licensed Software.
	• A list and examples of policies and procedures that will need to be created or revised.
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Order Management, CPOE, and Decision Support downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all

Task 4 Conduct Design Review	
descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Order Management, CPOE, and Decision Support downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will facilitate workshops to develop a County-wide Order Management, CPOE and Decision Support strategy, and define an order set/decision support approval process, which considers current County policy, level of maturity, and industry best practice. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
Subtask 4.4 Conduct Order Management, CPOE, and Decision Support Workflow Workshop Contractor will conduct Order Management, CPOE, and Decision Support Workflow Workshops as needed in which the future state workflows for Order Management, CPOE, and Decision Support will be demonstrated to County and decisions required for the design of Order Management, CPOE, and Decision Support functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Order Management, CPOE, and Decision Support. • Discuss the key decision points related to automation of capture and management of Order Management, CPOE, and Decision Support. • Document the key design decisions and desired outcomes related to Order Management, CPOE, and Decision Support in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Order Management, CPOE, and Decision Support in the DDMs. • Compare and contrast design elements for Order Management, CPOE, and Decision Support and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are	**Deliverable 4.4 Order Management, CPOE, and Decision Support Workflow Workshop** • Agenda/Schedule for Order Management, CPOE, and Decision Support Workflow Workshops. • Attendance sheet/roster of participants for Order Management, CPOE, and Decision Support Workflow Workshop (agenda and presentation). • List of materials for Order Management, CPOE, and Decision Support Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Order Management, CPOE, and Decision Support Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Order Management, CPOE, and Decision Support. **Acceptance Criteria:** • County-Approved Order Management, CPOE, and Decision Support Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
outstanding. • Refine and augment downtime strategy for Order Management, CPOE, and Decision Support Domain. • Refine and augment data conversion for Order Management, CPOE, and Decision Support. • At the end of the Order Management, CPOE, and Decision Support Workflow Workshop, Contractor will draft and finalize the Order Management, CPOE, and Decision Support Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Order Management, CPOE, and Decision Support Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Order Management, CPOE, and Decision Support final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Order Management, CPOE, and Decision Support SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Order Management, CPOE, and Decision Support Analyst; and
  ○ County Order Management, CPOE, and Decision Support SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Order Management, CPOE, and Decision Support processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.

Task 5 Complete Initial Partial System Build	
be included in the Initial Partial System Build.	
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Order Management, CPOE, and Decision Support. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Order Management, CPOE, and Decision Support and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Order Management, CPOE, and Decision Support Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Order Management, CPOE, and Decision Support SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Order Management, CPOE, and Decision Support Analyst;
  ○ County Order Management, CPOE, and Decision Support SOW Workgroup; and
  ○ County Order Management, CPOE, and Decision Support SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor.	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts

Task 6 Conduct System Validation	
Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Order Management, CPOE, and Decision Support reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Order Management, CPOE, and Decision Support Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach to be adapted for County.	• System Validation Session Event Summary Report for Order Management, CPOE, and Decision Support Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Order Management, CPOE, and Decision Support and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Order Management, CPOE, and Decision Support Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel.	

Task 6 Conduct System Validation	
• Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Order Management, CPOE, and Decision Support and Conduct System and Unit Testing	
Task Description	
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Order Management, CPOE, and Decision Support Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Order Management, CPOE, and Decision Support SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Order Management, CPOE, and Decision Support Analyst; and
  ○ County Order Management, CPOE, and Decision Support SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Order Management, CPOE, and Decision Support Licensed Software functionality and content until the full build of Order Management, CPOE, and Decision Support content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County	**Deliverable 7.1 Complete System Build for Order Management, CPOE, and Decision Support** • Release Schedule. • Iterative releases of Order Management, CPOE, and Decision Support Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Order Management, CPOE, and Decision Support Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status

Task 7 Complete Build of Order Management, CPOE, and Decision Support and Conduct System and Unit Testing	
SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Order Management, CPOE, and Decision Support Licensed Software has been fully configured to include all DDMs and DCWs related to Order Management, CPOE, and Decision Support.	Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Order Management, CPOE, and Decision Support builds meet specifications as documented in the final Detailed Design Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets

report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
  ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and
  ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released.
• Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing.
• Document County-Approved gateway criteria.
	targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County-Approved gateway criteria for unit and system test completion.

Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Order Management, CPOE, and Decision Support build	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested

Task 7 Complete Build of Order Management, CPOE, and Decision Support and Conduct System and Unit Testing	

as documented in the DCWs and DDMs is complete.
 	
Contractor will:
 	
• Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls.
• Release defect resolutions and implemented change requests as part of the build release cycles.
• Support County in re-testing resolved defects deployed by Contractor.
• Jointly decide with County through the governance process when the Order Management, CPOE, and Decision Support build is ready for moving to Integration Testing, based on:
  ○ Completeness of functionality and content;
  ○ Severity of outstanding defects; and
  ○ Severity of outstanding change requests.
	Order Management, CPOE, and Decision Support Licensed Software.
	
	• List of resolved defects, including date of completion, retest results, and County Approval.
	• County-Approved completed Unit and System Testing for Order Management, CPOE, and Decision Support Licensed Software.
	
	Acceptance Criteria:
	
	• Resolution of all outstanding defects defined as required for Order Management, CPOE, and Decision Support Licensed Software Acceptance.
	• Licensed Software Build Completion Document provided by Contractor and Approved by County.
	• Gateway criteria have either been achieved or exceptions documented and Approved by Project governance.
	• All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.9 (Radiology Statement of Work)

to the

Electronic Health Records System and Services Agreement

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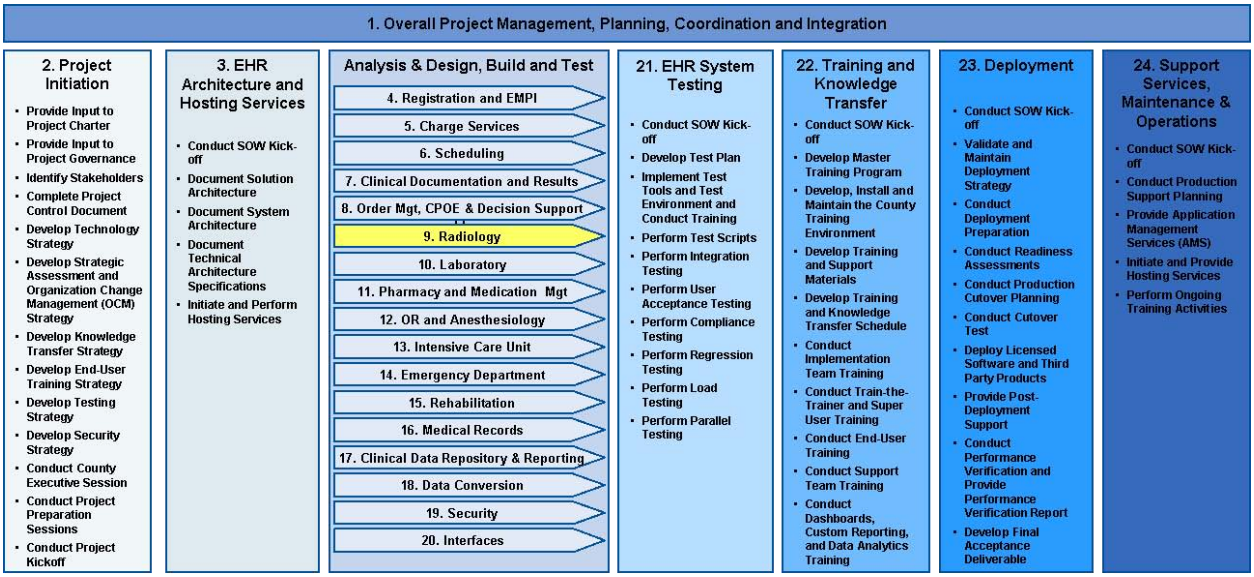
1. Introduction

This Exhibit A.9 (Radiology Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.9 (Radiology Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.9 (Radiology Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Radiology as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Radiology, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Radiology Management
- Departmental Scheduling Management
- Mammography Management

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a

fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.9 (Radiology Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.9 (Radiology Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Radiology Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Radiology SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Radiology	Deliverable 1.1 SOW Sub-Project Work Plan - Radiology
Subtask 1.2 Conduct Initiation Session for Radiology	Deliverable 1.2 Radiology Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
btask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Radiology Workshop	Deliverable 4.4 Radiology Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document(Key Deliverable)

Tasks/ Subtasks	Deliverables
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Radiology Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Radiology
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off/Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Radiology-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County** Radiology **Workgroup**" or "**County Workgroup**") and the County Radiology Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Radiology Architect;
  ○ Contractor Radiology Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Radiology SOW Lead;
  ○ County Radiology Workgroup;
  ○ County Transformation Lead;
  ○ County Radiology Analyst;

○ County Project Director; ○ County Project Manager; and ○ County Integration Architect.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Radiology As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Radiology-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.9 (Radiology Statement of Work) and subject to County Approval**.**	**Deliverable 1.**1 Radiology **Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Radiology-specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Radiology-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Radiology Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.9 (Radiology Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues,	**Deliverable 1.2 Radiology Initiation Session** • Radiology Initiation Session materials for County review one (1) week prior to Radiology Initiation Session. • Initial list of County Domains, Venues and Locations for which Radiology capabilities must be delivered for review during Radiology Initiation Session. • Demonstration of Radiology functionality. • List of County Workgroup members who

and Locations for which Radiology capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Radiology functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood.	attended the Radiology Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Radiology Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Radiology Initiation Session. • Radiology Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Radiology Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

• Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Radiology Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County. • Weekly updates demonstrate that, on an

that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements
• Contractor Key Employees ○ Contractor Radiology Delivery Consultant; ○ Contractor Solution Architect; and

Task 2 Conduct Current State Assessment	
○ Contractor Clinical Strategist. ● County Key Employees ○ County Radiology SOW Lead; ○ County Radiology Analyst; ○ County Radiology Workgroup; and ○ County Radiology SMEs.	
Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** ● List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** ● List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. ● County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Radiology workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed.	**Deliverable 2.2 Workflow Assessment** ● Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** ● Reviewed and finalized OWA posted on

Task 2 Conduct Current State Assessment	
Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
 	
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Radiology components, the Contractor knowledge base, and expertise of Contractor SMEs.
 	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
 	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	
	• Recommendations for improved processes to manage Radiology.
	
	• Documented County-Approved metrics to be utilized to determine success.
	
	• Recommendations for identifying implications with other workflows.
	
	• Recommendations for identifying industry best practices.
	
	• Documented risks.
	
	Acceptance Criteria:
	
	• County Approval of the Risk and Opportunities Documentation.
	
	• County acknowledgement that originally defined areas of workflow assessment have been accurately assessed.
	
	• Risks and Opportunities Documentation demonstrates substantial detail and breadth

Task 2 Conduct Current State Assessment	
	of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Radiology Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Radiology SOW Lead
  ○ County Radiology Workgroup
  ○ County Radiology SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs.

Task 3 Conduct System Review	
City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Radiology demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Radiology Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks	• DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Radiology. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda.

Task 3 Conduct System Review	

(also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Radiology covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
data collection and completion of design documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Radiology process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on Radiology. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality,	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Radiology process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Radiology processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM and DCWs.

Task 3 Conduct System Review	

training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan;
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate; and
  ○ Identify outstanding requirements and constraints from other workgroups (e.g. scheduling).
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.

Task 4 Conduct Design Review	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Radiology Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Radiology Lead Analyst; and
  ○ County Radiology SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other	**Deliverable 4.1 Design Session Documents** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Radiology workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for

Task 4 Conduct Design Review	
relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Radiology. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Radiology and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs.	System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Radiology data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	

Task 4 Conduct Design Review	
Subtasks/Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Radiology. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Radiology. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion.

Task 4 Conduct Design Review	
(on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	**Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Radiology workflow localization Deliverables and OWAs from other clinical disciplines, scheduling workgroup, agreements with third party vendors, and related services, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows. • Develop the following Deliverables: ○ Future State Workflow Diagrams covering the complete range of Radiology	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Radiology processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.

Task 4 Conduct Design Review	
processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems; ○ A list and examples of policies and procedures that will need to be created or revised; ○ Processes for maintaining and updating Radiology; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Radiology downtime and recovery strategies, including samples for Radiology, and third party vendor and related services; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc.	• Recommendations for Radiology downtime strategies and documentation, including samples based on County build of Licensed Software. • Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Radiology Workflow Workshop Contractor will conduct Radiology Workflow Workshops as needed in which the future state workflows for Radiology will be demonstrated to County and decisions required for the design of Radiology functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Radiology. • Discuss the key decision points related to automation of capture and management of Radiology. • Document the key design decisions and desired outcomes related to Radiology in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Radiology in the DDMs. • Compare and contrast design elements for Radiology and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel.	**Deliverable 4.4 Radiology Workflow Workshop** • Agenda/Schedule for Radiology Workflow Workshops. • Attendance sheet/roster of participants for Radiology Workflow Workshop (agenda and presentation). • List of materials for Radiology Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Radiology Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Radiology. **Acceptance Criteria:** • County-Approved Radiology Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
• Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for the Radiology Domain. • Refine and augment data conversion (historical data upload requirements) for the Radiology Domain. • At the end of the Radiology Workflow Workshop, Contractor will draft and finalize the Radiology Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Radiology Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Radiology final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Radiology Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Radiology SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Radiology Analyst; and
  ○ County Radiology SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Radiology processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.

Task 5 Complete Initial Partial System Build	
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Radiology. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Radiology and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Radiology Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Radiology Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Radiology SOW Lead;
  ○ Contractor Project Manager;
  ○ Contractor Project Director;
  ○ County Radiology Analyst;
  ○ County Radiology SOW Workgroup; and
  ○ County Radiology SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Radiology Licensed Software

Task 6 Conduct System Validation	
Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Radiology reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Radiology Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources,	including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Radiology Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Radiology Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment

Task 6 Conduct System Validation	
completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Radiology and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.

Task 7 Complete Build of Radiology and Conduct System and Unit Testing	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Radiology Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Radiology SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Radiology Analyst; and
  ○ County Radiology SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Radiology Licensed Software functionality and content until the full build of Radiology content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions.	**Deliverable 7.1 Complete System Build for Radiology** • Release Schedule. • Iterative releases of Radiology Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Radiology Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Radiology builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Radiology and Conduct System and Unit Testing	
• Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Radiology Licensed Software has been fully configured to include all DDMs and DCWs related to Radiology.	
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions. • Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online. • Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released. • Address identified Omissions as follows: ○ Document and verify the requirements to address the Omission in a consistent and structured format;	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log. • County validation that Approved changes to address Omissions fully address the documented omission specifications. • County-Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Radiology and Conduct System and Unit Testing	
○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. ● Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. ● Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Radiology build as documented in the DCWs and DDMs is complete. Contractor will: ● Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. ● Release defect resolutions and implemented change requests as part of the build release cycles. ● Support County in re-testing resolved defects deployed by Contractor. ● Jointly decide with County through the governance process when the Radiology build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** ● Documented results of completed and tested Radiology Licensed Software. ● List of resolved defects, including date of completion, retest results, and County Approval. ● County-Approved completed Unit and System Testing for Radiology Licensed Software. **Acceptance Criteria:** ● Resolution of all outstanding defects defined as required for Radiology Software Acceptance. ● Licensed Software Build Completion Document provided by Contractor and Approved by County. ● Gateway criteria have either been achieved

Task 7 Complete Build of Radiology and Conduct System and Unit Testing	
content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.10 (Laboratory Statement of Work)

to the

Electronic Health Records System and Services Agreement

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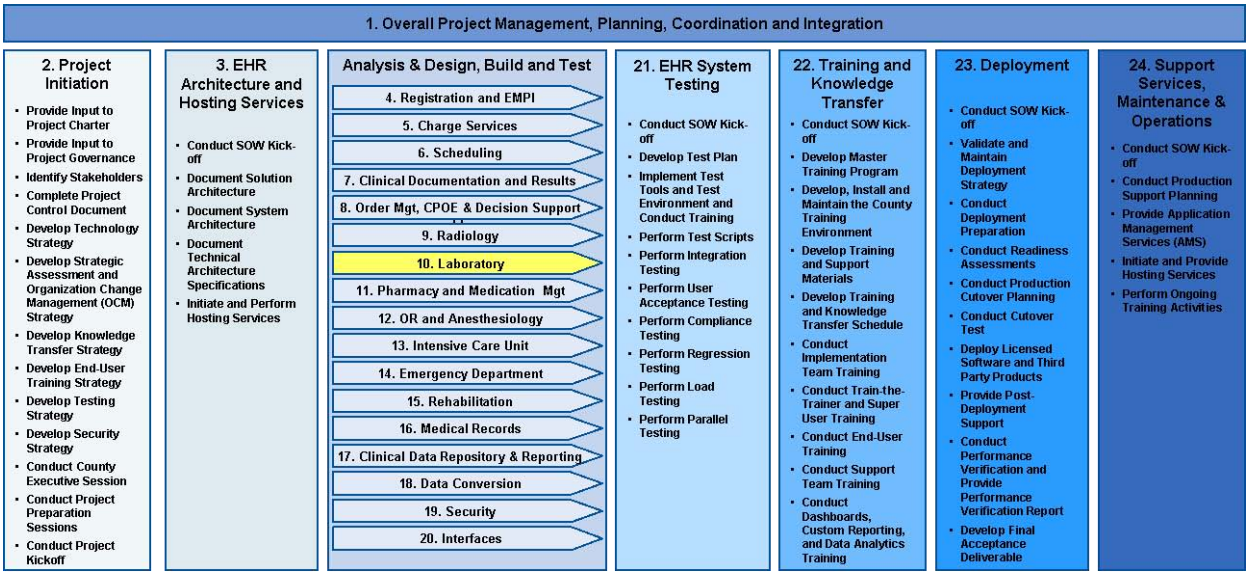
1. Introduction

This Exhibit A.10 (Laboratory Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.10 (Laboratory Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.10 (Laboratory Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Laboratory as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Laboratory, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- PathNet – General Laboratory
- PathNet - Microbiology
- PathNet – Anatomic Pathology
- PathNet – HLA – Human Leukocyte Antigen (Organ Transplant)
- PathNet – Blood Bank Transfusion
- PathNet – Outreach Service
- PathNet – Laboratory Imaging
- PathNet – Synoptic Reporting for Pathology

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and

- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.10 (Laboratory Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.10 (Laboratory Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the " **Contractor Laboratory Delivery Consultant**" or "**Contractor Delivery Consultant**")to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Laboratory SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Laboratory	Deliverable 1.1 SOW Sub-Project Work Plan - Laboratory
Subtask 1.2 Conduct Initiation Session for Laboratory Workgroup	Deliverable 1.2 Laboratory Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents

Tasks/Subtasks	Deliverables
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Laboratory Workflow Workshop	Deliverable 4.4 Laboratory Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Laboratory Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Laboratory
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Laboratory-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County** Laboratory **Workgroup**" or "**County Workgroup**") and the County Laboratory Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Laboratory Architect;

○ Contractor Laboratory Delivery Consultant; ○ Integration Architect; and ○ Clinical Strategist. • County Key Employees ○ County Laboratory SOW Lead; ○ County Laboratory Workgroup; ○ County Transformation Lead; ○ County Laboratory Analyst; ○ County Project Director; ○ County Project Manager; and ○ County Laboratory Architect.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Laboratory As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Laboratory-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.10 (Laboratory Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Laboratory Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Laboratory specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Laboratory-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Laboratory Workgroup Contractor will conduct an initiation session to	**Deliverable 1.2 Laboratory Initiation Session** • Laboratory Initiation Session materials for County review one (1) week prior to

introduce the County Workgroup to the Services covered by this Exhibit A.10 (Laboratory Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Laboratory capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Laboratory functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the	Laboratory Initiation Session. • Initial list of County Domains, Venues and Locations for which Laboratory capabilities must be delivered for review during Laboratory Initiation Session. • Demonstration of Laboratory functionality. • List of County Workgroup members who attended the Laboratory Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Laboratory Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Laboratory Initiation Session. • Laboratory Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Laboratory Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and

required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Laboratory Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training

personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County. • Weekly updates demonstrate that, on an ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document

Task 2 Conduct Current State Assessment	
Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Laboratory Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Laboratory SOW Lead;
  ○ County Laboratory Analyst;
  ○ County Laboratory Workgroup; and
  ○ County Laboratory SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, including third party vendors and instrumentation for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.

Subtask 2.2 Conduct Workflow Assessment
In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Laboratory workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows.
Contractor will document the assessment in the
	Deliverable 2.2 Workflow Assessment
	• Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to:
	  ○ Worksheets;
	  ○ Recommended workflows; and
	  ○ Key County requirements.
	• Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to

Task 2 Conduct Current State Assessment	

template-based structured OWA tool.
 	
Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated.
 	
Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed.
 	
Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy.
 	
County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.
	be recognized and addressed.
	
	● Workflows documented in sufficient detail to permit Contractor to:
	  ○ Compare to Best Practices; and
	  ○ Identify risks and opportunities as determined by County.
	
	Acceptance Criteria:
	
	● Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail.
	
	● County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
 	
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Laboratory components, the Contractor knowledge base, and expertise of Contractor SMEs.
 	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
 	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	
	● Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	
	● Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	
	● Recommendations for improved processes to manage Laboratory.
	
	● Documented County-Approved metrics to be utilized to determine success.
	
	● Recommendations for identifying implications with other workflows.
	
	● Recommendations for identifying industry best practices.
	
	● Documented risks.

Task 2 Conduct Current State Assessment	
	Acceptance Criteria: • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Laboratory Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Laboratory SOW Lead
  ○ County Laboratory Workgroup
  ○ County Laboratory SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.

Task 3 Conduct System Review	
Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Laboratory demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Laboratory Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead.	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Laboratory. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document.

Task 3 Conduct System Review	

• Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved.
• Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for
	• Project Status Reports.
	• Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained.
	• Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Laboratory covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
specific solution; ○ Assessment of County's ability to complete the remaining data collection and design decisions; and ○ Report on the status of education by County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Laboratory process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Laboratory process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Laboratory processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule.

Task 3 Conduct System Review	

progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed.
• Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Laboratory.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to
	• Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule.
	• Contractor Delivery Consultant support through ad hoc calls and e-mails.
	• Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 3 Conduct System Review	
schedule.	

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Laboratory Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Laboratory Lead Analyst; and
  ○ County Laboratory SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting

Task 4 Conduct Design Review	
solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Laboratory. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Laboratory and other related SOWs to date by County and identify further work that is required by County.	interdependencies between Laboratory workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Laboratory data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan.	

Task 4 Conduct Design Review	
• Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Laboratory. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources).	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Laboratory. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion

Task 4 Conduct Design Review	
• Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Laboratory workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Laboratory processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate

Task 4 Conduct Design Review	

• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Laboratory processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Laboratory;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions;
  ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures;
  ○ Recommendations for Laboratory downtime and recovery strategies, including samples; and
  ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
 	
Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor.
 	
Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and
	improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Laboratory downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that:
	  ○ All County patient care activities and services are addressed; and
	  ○ Realistic strategies for achieving Best Practice standards are delineated.
	• Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location.
	• Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Laboratory Workflow Workshop Contractor will conduct Laboratory Workflow Workshops as needed in which the future state workflows for Laboratory will be demonstrated to County and decisions required for the design of Laboratory functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Laboratory. • Discuss the key decision points related to automation of capture and management of Laboratory. • Document the key design decisions and desired outcomes related to Laboratory in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Laboratory in the DDMs. • Compare and contrast design elements for Laboratory and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan	**Deliverable 4.4 Laboratory Workflow Workshop** • Agenda/Schedule for Laboratory Workflow Workshops. • Attendance sheet/roster of participants for Laboratory Workflow Workshop (agenda and presentation). • List of materials for Laboratory Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Laboratory Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Laboratory. **Acceptance Criteria:** • County-Approved Laboratory Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Laboratory Domain. • At the end of the Laboratory Workflow Workshop, Contractor will draft and finalize the Laboratory Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Laboratory Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Laboratory final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.

Task 5 Complete Initial Partial System Build	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Laboratory Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Laboratory SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Laboratory Analyst; and
  ○ County Laboratory SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Laboratory processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Laboratory.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the

Task 5 Complete Initial Partial System Build	
Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Laboratory and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Laboratory Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Laboratory SOW Lead;
  ○ County Project Manager;
  ○ County Project Director;
  ○ County Laboratory Analyst;
  ○ County Laboratory SOW Workgroup; and
  ○ County Laboratory SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to:	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Laboratory Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between

Task 6 Conduct System Validation	
• Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Laboratory reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Laboratory Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing.	DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Laboratory Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Laboratory Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will:	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data

Task 6 Conduct System Validation	
• Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Laboratory and Conduct Unit and System Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Delivery Consultant;

Task 7 Complete Build of Laboratory and Conduct Unit and System Testing	
○ Contractor Clinical Strategist; ○ Contractor Solution Architect; ○ Contractor Integration Architect; and ○ Contractor Test Lead. ● County Key Employees ○ County Laboratory SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Laboratory Analyst; and ○ County Laboratory SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Laboratory Licensed Software functionality and content until the full build of Laboratory content and functionality is complete. Specific Contractor activities include: ● Develop a Release Schedule. ● Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. ● Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data and reports necessary to report on achieving Meaningful Use. ● On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. ● Define test scripts to validate interfaces with third-party vendor systems, services, and devices. ● Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. ● Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. ● Report weekly on progress toward Complete Build, and alert County of any issues or risks.	**Deliverable 7.1 Complete System Build for Laboratory** ● Release Schedule. ● Iterative releases of Laboratory Licensed Software content and functionality for Unit and System Testing. ● Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. ● Complete Build of Laboratory Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. ● Weekly updates on status of release and defect fixes as part of the Project Status Report. ● Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** ● County validation that releases of Laboratory builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Laboratory and Conduct Unit and System Testing	
• Notify County when the Laboratory Licensed Software has been fully configured to include all DDMs and DCWs related to Laboratory.	

Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests
As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have
	Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Laboratory build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Laboratory build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Laboratory Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Laboratory Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Laboratory Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the

Task 7 Complete Build of Laboratory and Conduct Unit and System Testing	
	issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.11 (Pharmacy and Medication Management

Statement of Work)

to the

Electronic Health Records System and Services Agreement

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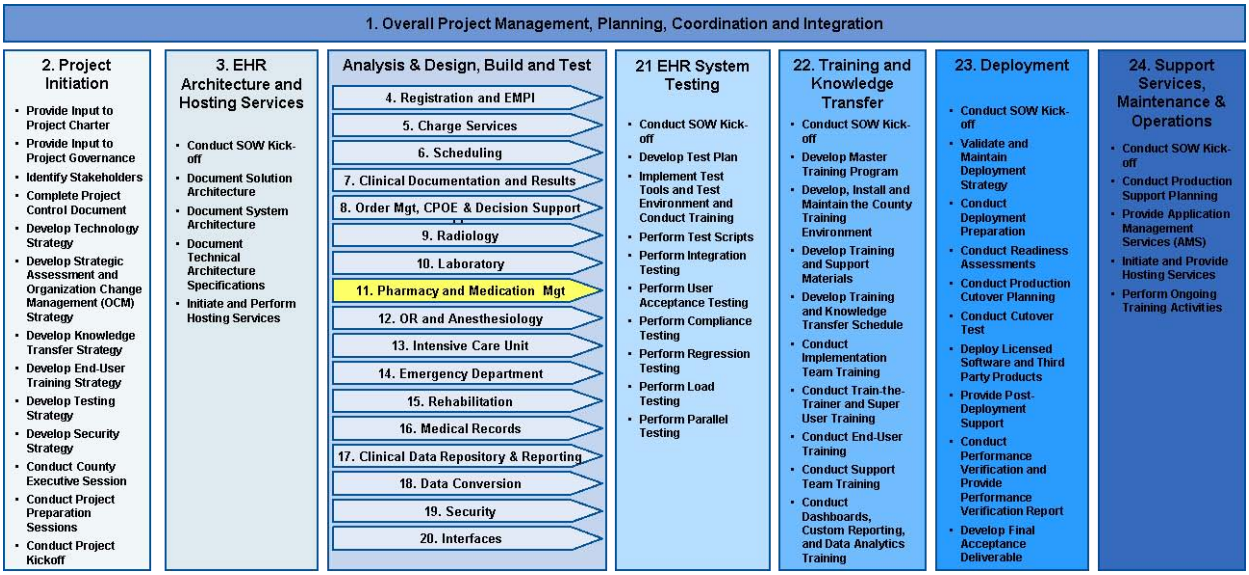
1. Introduction

This Exhibit A.11 (Pharmacy and Medication Management Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.11 (Pharmacy and Medication Management Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.11 (Pharmacy and Medication Management Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Pharmacy and Medication Management as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Pharmacy and Medication Management, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Pharmacy – Inpatient Pharmacy
- Pharmacy – Departmental Clinical Supply Chain
- CareNet – Medication Administration Record
- Point of Care Medication Administration - Tethered

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.11 (Pharmacy and Medication Management Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.11 (Pharmacy and Medication Management Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Pharmacy and Medication Management Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Pharmacy and Medication Management SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Pharmacy and Medication Management	Deliverable 1.1 SOW Sub-Project Work Plan - Pharmacy and Medication Management
Subtask 1.2 Conduct Initiation Session for Pharmacy and Medication Management Workgroup	Deliverable 1.2 Pharmacy and Medication Management Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data	Deliverable 3.2 System Review Data Collection

Tasks/ Subtasks	Deliverables
Collection (System Review Follow-Up)	
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Pharmacy and Medication Management Workflow Workshop	Deliverable 4.4 Pharmacy and Medication Management Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Pharmacy and Medication Management Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Pharmacy and Medication Management
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project

Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Pharmacy and Medication Management-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this

SOW (referred to in this Exhibit as the "**County Pharmacy and Medication Management Workgroup**" or "**County Workgroup**") and the County Pharmacy and Medication Management Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.

Personnel Requirements

- Contractor Key Employees
  - Contractor Project Director;
  - Contractor Project Manager;
  - Pharmacy and Medication Management Architect;
  - Contractor Pharmacy and Medication Management Delivery Consultant;
  - Integration Architect; and
  - Clinical Strategist.
- County Key Employees
  - County Pharmacy and Medication Management SOW Lead;
  - County Pharmacy and Medication Management Workgroup;
  - County Transformation Lead;
  - County Pharmacy and Medication Management Analyst;
  - County Project Director;
  - County Project Manager; and
  - County Integration Architect.

Subtasks/Deliverables

Subtask 1.1 Develop Detailed Sub-Project Work Plan – Pharmacy and Medication Management As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Pharmacy and Medication Management-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and	**Deliverable 1.1 Pharmacy and Medication Management Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Pharmacy and Medication Management specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Pharmacy and Medication Management-specific sub-Project Work Plan.

• Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.11 (Pharmacy and Medication Management Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for Pharmacy and Medication Management Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.11 (Pharmacy and Medication Management Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Pharmacy and Medication Management capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Pharmacy and Medication Management functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Demonstrate Medication Reconciliation functionality and documentation across all medication reconciliation. • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-	**Deliverable 1.2 Pharmacy and Medication Management Initiation Session** • Pharmacy and Medication Management Initiation Session materials for County review one (1) week prior to Pharmacy and Medication Management Initiation Session. • Initial list of County Domains, Venues and Locations for which Pharmacy and Medication Management capabilities must be delivered for review during Pharmacy and Medication Management Initiation Session. • Demonstration of Pharmacy and Medication Management functionality. • List of County Workgroup members who attended the Pharmacy and Medication Management Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Pharmacy and Medication Management Initiation Session and other County stakeholders as mutually agreed upon. • Demonstrated Medication Reconciliation functionality and documentation across all

learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	medication reconciliation. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Pharmacy and Medication Management Initiation Session. • Pharmacy and Medication Management Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Pharmacy and Medication Management Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Pharmacy and Medication Management Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants.

Workgroup for training/education exercises.
• Monitoring the use of WBTs, and review of MethodM Online.
• Providing telephone and e-mail support to County personnel.
• Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee.
• Supporting the County education coordinator in running Education Tracker Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	• Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County

	personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Pharmacy and Medication Management Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Pharmacy and Medication Management SOW Lead;
  ○ County Pharmacy and Medication Management Analyst;
  ○ County Pharmacy and Medication Management Workgroup; and
  ○ County Pharmacy and Medication Management SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, including third party vendors and medication automation for the workflow assessment across all DHS Clusters.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is

Task 2 Conduct Current State Assessment	
Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Pharmacy and Medication Management workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. • Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. • Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** • Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Task 2 Conduct Current State Assessment	

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Pharmacy and Medication Management components, the Contractor knowledge base, and expertise of Contractor SMEs.
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	• Recommendations for improved processes to manage Pharmacy and Medication Management.
	• Documented County-Approved metrics to be utilized to determine success.
	• Recommendations for identifying implications with other workflows.
	• Recommendations for identifying industry best practices.
	• Documented risks.
	
	Acceptance Criteria:
	• County Approval of the Risk and Opportunities Documentation.
	• County acknowledgement that originally defined areas of workflow assessment have been accurately assessed.
	• Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County.
	• County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Pharmacy and Medication Management Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Pharmacy and Medication Management SOW Lead
  ○ County Pharmacy and Medication Management Workgroup
  ○ County Pharmacy and Medication Management SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will:	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed.

Task 3 Conduct System Review	
• Conduct a Pharmacy and Medication Management for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Pharmacy and Medication Management Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**").	• System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Pharmacy and Medication Management. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda. • County-Approved System Review Session Event Summary Report.

Task 3 Conduct System Review	

Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for data collection and completion of design
	• Demonstration of Pharmacy and Medication Management covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Pharmacy and Medication Management process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Pharmacy and Medication Management. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality,	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Pharmacy and Medication Management process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Pharmacy and Medication Management processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM

Task 3 Conduct System Review	

training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;

Task 4 Conduct Design Review	
○ Contractor Pharmacy and Medication Management Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect • County Key Employees ○ County Project Director; ○ County Project Manager; ○ County Pharmacy and Medication Management Lead Analyst; and ○ County Pharmacy and Medication Management SOW Workgroup.	
Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online.	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Pharmacy and Medication Management workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session).

Task 4 Conduct Design Review	
• Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Pharmacy and Medication Management. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Pharmacy and Medication Management and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required	• County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Pharmacy and Medication Management data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	

Task 4 Conduct Design Review	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Pharmacy and Medication Management. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail.	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Pharmacy and Medication Management. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document

Task 4 Conduct Design Review	
• Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Pharmacy and Medication Management workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows. • Develop the following Deliverables: ○ Future State Workflow Diagrams	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Pharmacy and Medication Management processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics,

Task 4 Conduct Design Review	
covering the complete range of Pharmacy and Medication Management processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems; ○ A list and examples of policies and procedures that will need to be created or revised; ○ Processes for maintaining and updating Pharmacy and Medication Management; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Pharmacy and Medication Management downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and	procedures for how to collect baseline data, track measures, and compare before and after performance. • Recommendations for Pharmacy and Medication Management downtime strategies and documentation, including samples based on County build of Licensed Software. • Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Pharmacy and Medication Management Workflow Workshop Contractor will conduct Pharmacy and Medication Management Workflow Workshops as needed in which the future state workflows for Pharmacy and Medication Management will be demonstrated to County and decisions required for the design of Pharmacy and Medication Management functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Pharmacy and Medication Management. • Discuss the key decision points related to automation of capture and management of Pharmacy and Medication Management. • Document the key design decisions and desired outcomes related to Pharmacy and Medication Management in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Pharmacy and Medication Management in the DDMs. • Compare and contrast design elements for Pharmacy and Medication Management and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there	**Deliverable 4.4 Pharmacy and Medication Management Workflow Workshop** • Agenda/Schedule for Pharmacy and Medication Management Workflow Workshops. • Attendance sheet/roster of participants for Pharmacy and Medication Management Workflow Workshop (agenda and presentation). • List of materials for Pharmacy and Medication Management Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Pharmacy and Medication Management Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Pharmacy and Medication Management. **Acceptance Criteria:** • County-Approved Pharmacy and Medication Management Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed

Task 4 Conduct Design Review	
is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Pharmacy and Medication Management Domain. • At the end of the Pharmacy and Medication Management Workflow Workshop, Contractor will draft and finalize the Pharmacy and Medication Management Workflow Workshop Event Summary Report.	upon next steps. • County Approval of the design elements and design decisions.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Pharmacy and Medication Management Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Pharmacy and Medication Management final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Pharmacy and Medication Management Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Pharmacy and Medication Management SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Pharmacy and Medication Management Analyst; and
  ○ County Pharmacy and Medication Management SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Pharmacy and Medication Management processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.

Task 5 Complete Initial Partial System Build	
be included in the Initial Partial System Build.	
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Pharmacy and Medication Management. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Pharmacy and Medication Management and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Pharmacy and Medication Management Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Pharmacy and Medication Management Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Pharmacy and Medication Management SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Pharmacy and Medication Management Analyst;
  ○ County Pharmacy and Medication Management SOW Workgroup; and
  ○ County Pharmacy and Medication Management SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor.	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts

Task 6 Conduct System Validation	
Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Pharmacy and Medication Management reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Pharmacy and Medication Management Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing.	to be adapted for County. • System Validation Session Event Summary Report for Pharmacy and Medication Management Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Pharmacy and Medication Management Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Pharmacy and Medication Management Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate	

Task 6 Conduct System Validation	
design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Pharmacy and Medication Management and Conduct Unit and System Testing	
Task Description	
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Pharmacy and Medication Management Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Pharmacy and Medication Management SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Pharmacy and Medication Management Analyst; and
  ○ County Pharmacy and Medication Management SOW Workgroup.	

Subtasks/Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Pharmacy and Medication Management Licensed Software functionality and content until the full build of Pharmacy and Medication Management content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule	**Deliverable 7.1 Complete System Build for Pharmacy and Medication Management** • Release Schedule. • Iterative releases of Pharmacy and Medication Management Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Pharmacy and Medication Management Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status

Task 7 Complete Build of Pharmacy and Medication Management and Conduct Unit and System Testing	
as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Pharmacy and Medication Management Licensed Software has been fully configured to include all DDMs and DCWs related to Pharmacy and Medication Management.	Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Pharmacy and Medication Management builds meet specifications as documented in the final Detailed Design Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues

Task 7 Complete Build of Pharmacy and Medication Management and Conduct Unit and System Testing	

• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
  ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and
  ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released.
• Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing.
• Document County-Approved gateway criteria.
	Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Pharmacy and Medication Management build as documented in the DCWs and DDMs is complete.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Pharmacy and Medication Management

Task 7 Complete Build of Pharmacy and Medication Management and Conduct Unit and System Testing	

Contractor will:
• Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls.
• Release defect resolutions and implemented change requests as part of the build release cycles.
• Support County in re-testing resolved defects deployed by Contractor.
• Jointly decide with County through the governance process when the Pharmacy and Medication Management build is ready for moving to Integration Testing, based on:
  ○ Completeness of functionality and content;
  ○ Severity of outstanding defects; and
  ○ Severity of outstanding change requests.
	Licensed Software.
	• List of resolved defects, including date of completion, retest results, and County Approval.
	• County-Approved completed Unit and System Testing for Pharmacy and Medication Management Licensed Software.
	
	Acceptance Criteria:
	• Resolution of all outstanding defects defined as required for Pharmacy and Medication Management Licensed Software Acceptance.
	• Licensed Software Build Completion Document provided by Contractor and Approved by County.
	• Gateway criteria have either been achieved or exceptions documented and Approved by Project governance.
	• All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.12 (Operating Room (OR) and Anesthesiology

Statement of Work)

to the

Electronic Health Records System and Services Agreement

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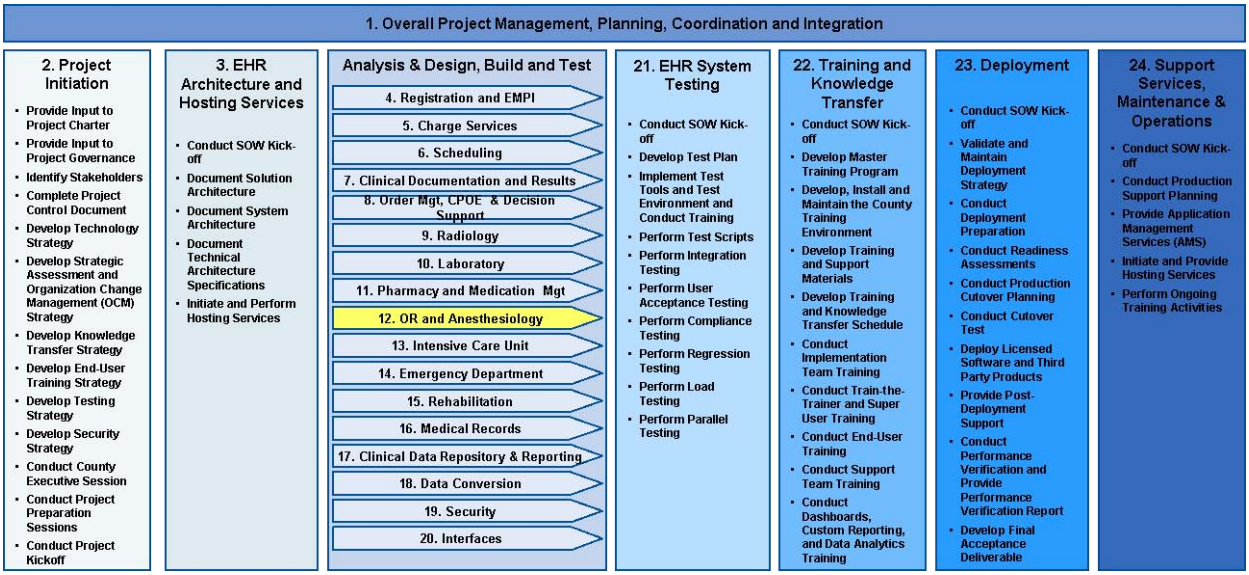
1. Introduction

This Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver OR and Anesthesiology as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of OR and Anesthesiology, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- SurgiNet - Surgical Management
- SurgiNet - Surgery Case Tracking
- SurgiNet - Perioperative Nursing Care Management
- SurgiNet - Departmental Clinical Supply Chain
- SurgiNet – Departmental Scheduling Management
- Anesthesia Management

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and

- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor OR and Anesthesiology Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County OR and Anesthesiology SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - OR and Anesthesiology	Deliverable 1.1 SOW Sub-Project Work Plan - OR and Anesthesiology
Subtask 1.2 Conduct Initiation Session for OR and Anesthesiology Workgroup	Deliverable 1.2 OR and Anesthesiology Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection

Tasks/ Subtasks	Deliverables
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct OR and Anesthesiology Workflow Workshop	Deliverable 4.4 OR and Anesthesiology Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of OR and Anesthesiology Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for OR and Anesthesiology
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found

in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. OR and Anesthesiology -specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County OR and Anesthesiology Workgroup**" or "**County Workgroup**") and the County OR and Anesthesiology Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.

Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ OR and Anesthesiology (SurgiNet) Architect;
  ○ OR and Anesthesiology (SurgiNet) Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County OR and Anesthesiology SOW Lead;
  ○ County OR and Anesthesiology Workgroup;
  ○ County Transformation Lead;
  ○ County OR and Anesthesiology Analyst;
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County OR and Anesthesiology Integration Architect;	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – OR and Anesthesiology As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include an OR and Anesthesiology-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and	**Deliverable 1.1 OR and Anesthesiology Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved OR and Anesthesiology specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and OR and Anesthesiology-specific sub-Project Work Plan.

Milestones specific to this Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for OR and Anesthesiology Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.12 (Operating Room (OR) and Anesthesiology Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which OR and Anesthesiology capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate OR and Anesthesiology functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques,	**Deliverable 1.2 OR and Anesthesiology Initiation Session** • OR and Anesthesiology Initiation Session materials for County review one (1) week prior to OR and Anesthesiology Initiation Session. • Initial list of County Domains, Venues and Locations for which OR and Anesthesiology capabilities must be delivered for review during OR and Anesthesiology Initiation Session. • Demonstration of OR and Anesthesiology functionality. • List of County Workgroup members who attended the OR and Anesthesiology Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the OR and Anesthesiology Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the OR and Anesthesiology Initiation Session. • OR and Anesthesiology Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and

measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved OR and Anesthesiology Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the OR and Anesthesiology Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives.

Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.

	• Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor OR and Anesthesiology Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County OR and Anesthesiology SOW Lead;
  ○ County OR and Anesthesiology Analyst;
  ○ County OR and Anesthesiology Workgroup; and
  ○ County OR and Anesthesiology SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.

Task 2 Conduct Current State Assessment	
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current OR and Anesthesiology workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	**Deliverable 2.2 Workflow Assessment** ● Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** ● Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. ● County reviewed and Approved findings.
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the OR and Anesthesiology components, the Contractor knowledge base, and expertise of Contractor SMEs.	**Deliverable 2.3 Risk and Opportunities Documentation** ● Workflow assessment report including completed OWA tool and identified risks and opportunities report. ● Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving: ○ Efficiency; ○ Patient safety;

Task 2 Conduct Current State Assessment	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation. Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.	○ Quality of care; and ○ Patient experience. • Recommendations for improved processes to manage OR and Anesthesiology. • Documented County-Approved metrics to be utilized to determine success. • Recommendations for identifying implications with other workflows. • Recommendations for identifying industry best practices. • Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements
• Contractor Key Employees ○ Contractor OR and Anesthesiology Delivery Consultant; ○ Contractor Project Director; ○ Contractor Project Manager;

Task 3 Conduct System Review	
○ Contractor Clinical Strategist; ○ Contractor Integration Architect; and ○ Contractor Solution Architect. • County Key Employees ○ County Project Director; ○ County Project Manager; ○ County Integration Architect; ○ County OR and Anesthesiology SOW Lead; ○ County OR and Anesthesiology Analyst; ○ County OR and Anesthesiology Workgroup; and ○ County OR and Anesthesiology SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	
Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct an OR and Anesthesiology demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the OR and	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of OR and Anesthesiology. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all

Task 3 Conduct System Review	
Anesthesiology Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design. • Work with the County Workgroup to begin the initial population of the DCWs. • Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently. • Work with the County Workgroup and County SMEs to begin documenting design	participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda. • County-Approved System Review Session Event Summary Report. • Demonstration of OR and Anesthesiology covers all relevant County Domains, Venues, and Locations. • Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.

Task 3 Conduct System Review	

decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for data collection and completion of design documents with County.
Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related

Task 3 Conduct System Review	
County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice OR and Anesthesiology process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the OR and Anesthesiology. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the	to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice OR and Anesthesiology process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the OR and Anesthesiology processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM and DCWs. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). **Acceptance Criteria:** • Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-

Task 3 Conduct System Review	

Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor OR and Anesthesiology Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ Transformation Coordinator;
  ○ County OR and Anesthesiology Integration Architect;
  ○ County OR and Anesthesiology Lead Analyst;
  ○ County OR and Anesthesiology Lead; and
  ○ County OR and Anesthesiology SOW Workgroup.

Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between OR and Anesthesiology workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's

Task 4 Conduct Design Review	
established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to OR and Anesthesiology. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for OR and Anesthesiology and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection	ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the OR and Anesthesiology data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at

Task 4 Conduct Design Review	
process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for OR and Anesthesiology. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for OR and Anesthesiology. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.

Task 4 Conduct Design Review	

Subtask 4.3 Conduct Workflow Localization
The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy.
Contractor will:
• Draft an agenda for meetings that will be held at County facilities and departments for review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between OR and Anesthesiology workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of OR and Anesthesiology processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating OR and Anesthesiology;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve
	Deliverable 4.3 Workflow Localization Documents
	• List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials).
	• Future State Workflow Diagrams covering the complete range of OR and Anesthesiology processes impacted by the Licensed Software.
	• A list and examples of policies and procedures that will need to be created or revised.
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for OR and Anesthesiology downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization

Task 4 Conduct Design Review	
identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for OR and Anesthesiology downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	Documents. ● Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. ● Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. ● Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. ● Suggested changes are achievable within County's resource constraints.
Subtask 4.4 Conduct OR and Anesthesiology Workflow Workshop Contractor will conduct OR and Anesthesiology Workflow Workshops as needed in which the future state workflows for OR and	**Deliverable 4.4 OR and Anesthesiology Workflow Workshop** ● Agenda/Schedule for OR and Anesthesiology Workflow Workshops. ● Attendance sheet/roster of participants for

Task 4 Conduct Design Review	
Anesthesiology will be demonstrated to County and decisions required for the design of OR and Anesthesiology functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for OR and Anesthesiology. • Discuss the key decision points related to automation of capture and management of OR and Anesthesiology. • Document the key design decisions and desired outcomes related to OR and Anesthesiology in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and OR and Anesthesiology in the DDMs. • Compare and contrast design elements for OR and Anesthesiology and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for OR and Anesthesiology Domain. • At the end of the OR and Anesthesiology Workflow Workshop, Contractor will draft and finalize the OR and Anesthesiology Workflow Workshop Event Summary Report.	OR and Anesthesiology Workflow Workshop (agenda and presentation). • List of materials for OR and Anesthesiology Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • OR and Anesthesiology Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for OR and Anesthesiology. **Acceptance Criteria:** • County-Approved OR and Anesthesiology Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document.

Task 4 Conduct Design Review	
specifications for the OR and Anesthesiology Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The OR and Anesthesiology final Detailed Design Document shall include documentation on all design decisions, including: ● County Approval of the data collection and decision documents; ● Whether the decision followed Contractor's recommendation or not; and ● Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	● Final DCWs. ● Final DDM. ● Final Future-State Workflows Diagrams. **Acceptance Criteria** ● Content and functional coverage of system build is included in final Detailed Design Document. ● Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements
● Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor OR and Anesthesiology Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect; ● County Key Employees ○ County OR and Anesthesiology SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County OR and Anesthesiology Analyst; and ○ County OR and Anesthesiology SOW Workgroup.

Task 5 Complete Initial Partial System Build	
Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and OR and Anesthesiology processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for OR and Anesthesiology. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation
Task Description
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County OR and Anesthesiology and prepare the County for testing of the design build. Contractor and County will begin the development

Task 6 Conduct System Validation	
of unit and system test scripts and test data for the OR and Anesthesiology Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor OR and Anesthesiology Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County OR and Anesthesiology SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County OR and Anesthesiology Analyst;
  ○ County OR and Anesthesiology SOW Workgroup; and
  ○ County OR and Anesthesiology SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for OR and Anesthesiology Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has

Task 6 Conduct System Validation	
Workgroup. • Validate database build to date of System Validation Session. • Validate proposed OR and Anesthesiology reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the OR and Anesthesiology Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of OR and Anesthesiology Unit and System Test scripts (including test script for reviewing historical data).	provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of OR and Anesthesiology Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live.

Task 6 Conduct System Validation	
• Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of OR and Anesthesiology and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor OR and Anesthesiology Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County OR and Anesthesiology SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County OR and Anesthesiology Analyst;

Task 7 Complete Build of OR and Anesthesiology and Conduct System and Unit Testing	
○ County OR and Anesthesiology SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build OR and Anesthesiology Licensed Software functionality and content until the full build of OR and Anesthesiology content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the OR and Anesthesiology Licensed Software has been fully configured to include all DDMs and DCWs related to OR and Anesthesiology.	**Deliverable 7.1 Complete System Build for OR and Anesthesiology** • Release Schedule. • Iterative releases of OR and Anesthesiology Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of OR and Anesthesiology Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of OR and Anesthesiology builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of OR and Anesthesiology and Conduct System and Unit Testing	

Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests
As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
	Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of OR and Anesthesiology and Conduct System and Unit Testing	
○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the OR and Anesthesiology build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the OR and Anesthesiology build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested OR and Anesthesiology Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for OR and Anesthesiology Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for OR and Anesthesiology Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the

Task 7 Complete Build of OR and Anesthesiology and Conduct System and Unit Testing	
	issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.13 (Intensive Care Unit Statement of Work)

to the

Electronic Health Records System and Services Agreement

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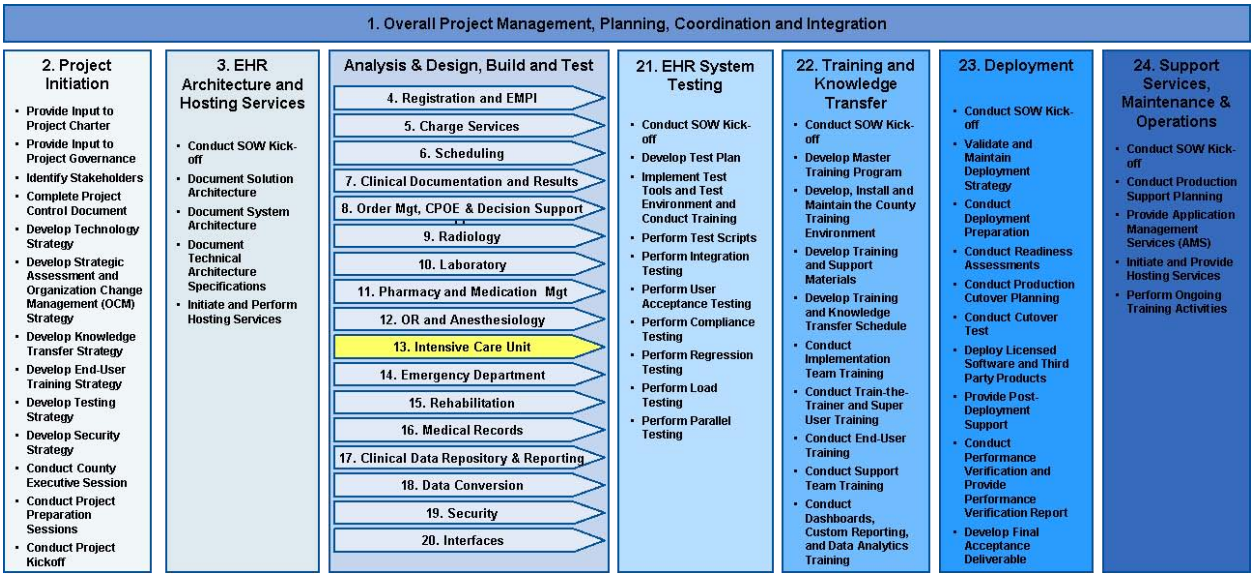
1. Introduction

This Exhibit A.13 (Intensive Care Unit Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.13 (Intensive Care Unit Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.13 (Intensive Care Unit Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Intensive Care Unit as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of the Intensive Care Unit, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Critical Care – Inet Critical Care
- CareAware MultiMedia – Digital Objects

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a

fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.13 (Intensive Care Unit Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.13 (Intensive Care Unit Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Intensive Care Unit Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Intensive Care Unit SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Intensive Care Unit	Deliverable 1.1 SOW Sub-Project Work Plan - Intensive Care Unit
Subtask 1.2 Conduct Initiation Session for Intensive Care Unit Workgroup	Deliverable 1.2 Intensive Care Unit Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Intensive Care Unit Workflow Workshop	Deliverable 4.4 Intensive Care Unit Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)

Tasks/Subtasks	Deliverables
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Intensive Care Unit Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Intensive Care Unit
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Intensive Care Unit-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Intensive Care Unit Workgroup**" or "**County Workgroup**") and the County Intensive Care Unit Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ CareNet Architect;
  ○ CareAware Architect;
  ○ Intensive Care Unit Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Intensive Care Unit SOW Lead;
  ○ County Intensive Care Unit Workgroup
  ○ County Transformation Lead;

○ County Intensive Care Unit Analyst; ○ County Project Director; ○ County Project Manager; and ○ County Integration Architect.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Intensive Care Unit As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include an Intensive Care Unit-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: ● Deliverables, tasks, and subtasks; ● Associated dependencies among Deliverables, tasks, and subtasks; ● Resources (hours and roles) required for each Deliverable, task, and subtask; ● Start date and date of completion for each Deliverable, task, and subtask; ● County review period for each Deliverable; ● Acceptance Criteria for each Deliverable; ● County Deliverable review period; and ● Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.13 (Intensive Care Unit Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Intensive Care Unit Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** ● County-Approved Intensive Care Unit specific sub-Project Work Plan. ● Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. ● Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. ● Confirmed availability of Contractor resources required to implement the Project Work Plan and Intensive Care Unit-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Intensive Care Unit Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.13 (Intensive Care Unit Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows:	**Deliverable 1.2 Intensive Care Unit Initiation Session** ● Intensive Care Unit Initiation Session materials for County review one (1) week prior to Intensive Care Unit Initiation Session. ● Initial list of County Domains, Venues and Locations for which Intensive Care Unit capabilities must be delivered for review during Intensive Care Unit Initiation Session. ● Demonstration of Intensive Care Unit

• Review and document Domains, Venues, and Locations for which Intensive Care Unit capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Intensive Care Unit functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and	functionality. • List of County Workgroup members who attended the Intensive Care Unit Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Intensive Care Unit Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Intensive Care Unit Initiation Session. • Intensive Care Unit Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Intensive Care Unit Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Intensive Care Unit Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.

knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	• Weekly updates demonstrate that, on an ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements
• Contractor Key Employees ○ Contractor Intensive Care Unit Delivery Consultant;

Task 2 Conduct Current State Assessment	
○ Contractor Solution Architect; and ○ Contractor Clinical Strategist. ● County Key Employees ○ County Intensive Care Unit SOW Lead; ○ County Intensive Care Unit Analyst; ○ County Intensive Care Unit Workgroup; and ○ County Intensive Care Unit SMEs.	
Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** ● List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** ● List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. ● County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Intensive Care Unit workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across	**Deliverable 2.2 Workflow Assessment** ● Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County.

Task 2 Conduct Current State Assessment	
Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	**Acceptance Criteria:** • Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. • County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Intensive Care Unit components, the Contractor knowledge base, and expertise of Contractor SMEs.
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	• Recommendations for improved processes to manage Intensive Care Unit.
	• Documented County-Approved metrics to be utilized to determine success.
	• Recommendations for identifying implications with other workflows.
	• Recommendations for identifying industry best practices.
	• Documented risks.
	
	Acceptance Criteria:
	• County Approval of the Risk and Opportunities Documentation.
	• County acknowledgement that originally defined areas of workflow assessment have been accurately assessed.

Task 2 Conduct Current State Assessment	
	• Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review	
Task Description	
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Architect;
  ○ Contractor Intensive Care Unit Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Intensive Care Unit Analyst;
  ○ County Intensive Care Unit SOW Lead;
  ○ County Intensive Care Unit Workgroup; and
  ○ County Intensive Care Unit SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System

Task 3 Conduct System Review	
anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct an Intensive Care Unit demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Intensive Care Unit Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions.	Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Intensive Care Unit. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep

Task 3 Conduct System Review	

• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary
	progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Intensive Care Unit covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County. Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Intensive Care Unit process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Intensive Care Unit process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Intensive Care Unit processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of

Task 3 Conduct System Review	

DDMs and DCWs to assess the impact on the Intensive Care Unit.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.

Task 4 Conduct Design Review	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Intensive Care Unit Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Intensive Care Unit Analyst;
  ○ County Intensive Care Unit SOW Lead; and
  ○ County Intensive Care Unit SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Intensive Care Unit workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers).

Task 4 Conduct Design Review	
Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Intensive Care Unit. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Intensive Care Unit and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials	**Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Intensive Care Unit data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	

Task 4 Conduct Design Review	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Intensive Care Unit. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Intensive Care Unit. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion.

Task 4 Conduct Design Review	
(on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	**Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Intensive Care Unit workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows. • Develop the following Deliverables: ○ Future State Workflow Diagrams covering the complete range of Intensive Care Unit processes impacted by the Licensed Software and with attention to	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Intensive Care Unit processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.

Task 4 Conduct Design Review	
interrelationships with other modules and other relevant systems; ○ A list and examples of policies and procedures that will need to be created or revised; ○ Processes for maintaining and updating Intensive Care Unit; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Intensive Care Unit downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback	• Recommendations for Intensive Care Unit downtime strategies and documentation, including samples based on County build of Licensed Software. • Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Intensive Care Unit Workflow Workshop Contractor will conduct Intensive Care Unit Workflow Workshops as needed in which the future state workflows for Intensive Care Unit will be demonstrated to County and decisions required for the design of Intensive Care Unit functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Intensive Care Unit. • Discuss the key decision points related to automation of capture and management of Intensive Care Unit. • Document the key design decisions and desired outcomes related to Intensive Care Unit in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Intensive Care Unit in the DDMs. • Compare and contrast design elements for Intensive Care Unit and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding.	**Deliverable 4.4 Intensive Care Unit Workflow Workshop** • Agenda/Schedule for Intensive Care Unit Workflow Workshops. • Attendance sheet/roster of participants for Intensive Care Unit Workflow Workshop (agenda and presentation). • List of materials for Intensive Care Unit Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Intensive Care Unit Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Intensive Care Unit. **Acceptance Criteria:** • County-Approved Intensive Care Unit Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
• Refine and augment downtime strategy for Intensive Care Unit Domain. • At the end of the Intensive Care Unit Workflow Workshop, Contractor will draft and finalize the Intensive Care Unit Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Intensive Care Unit Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Intensive Care Unit final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Intensive Care Unit Delivery Consultant;

Task 5 Complete Initial Partial System Build	
○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect; • County Key Employees ○ County Intensive Care Unit SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Intensive Care Unit Analyst; and ○ County Intensive Care Unit SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment (including relevant Interfaces to external systems and devices) and to include different care providers, different care venues, and disciplines, and Intensive Care Unit processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build (including relevant Interfaces to external systems and devices) for ICU. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Intensive Care Unit. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and

Task 5 Complete Initial Partial System Build	
	DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Intensive Care Unit and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Intensive Care Unit Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Intensive Care Unit Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Intensive Care Unit SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Intensive Care Unit Analyst;
  ○ County Intensive Care Unit SOW Workgroup; and
  ○ County Intensive Care Unit SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Intensive Care Unit Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents.

Task 6 Conduct System Validation	
Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Intensive Care Unit reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Intensive Care Unit Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County.	**Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Intensive Care Unit Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Intensive Care Unit Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing,

Task 6 Conduct System Validation	
• Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Intensive Care Unit and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Intensive Care Unit Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.

Task 7 Complete Build of Intensive Care Unit and Conduct System and Unit Testing	

• County Key Employees
  ○ County Intensive Care Unit SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Intensive Care Unit Analyst;
  ○ County Intensive Care Unit SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Intensive Care Unit Licensed Software functionality and content until the full build of Intensive Care Unit content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Intensive Care Unit Licensed Software has been fully configured to include all DDMs and DCWs related to	**Deliverable 7.1 Complete System Build for Intensive Care Unit** • Release Schedule. • Iterative releases of Intensive Care Unit Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Intensive Care Unit Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Intensive Care Unit builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Intensive Care Unit and Conduct System and Unit Testing	
Intensive Care Unit.	

Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests
As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process;
	Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Intensive Care Unit and Conduct System and Unit Testing	
○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Intensive Care Unit build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Intensive Care Unit build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Intensive Care Unit Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Intensive Care Unit Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Intensive Care Unit Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and

Task 7 Complete Build of Intensive Care Unit and Conduct System and Unit Testing	
	documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.14 (Emergency Department Statement of Work)

to the

Electronic Health Records System and Services Agreement

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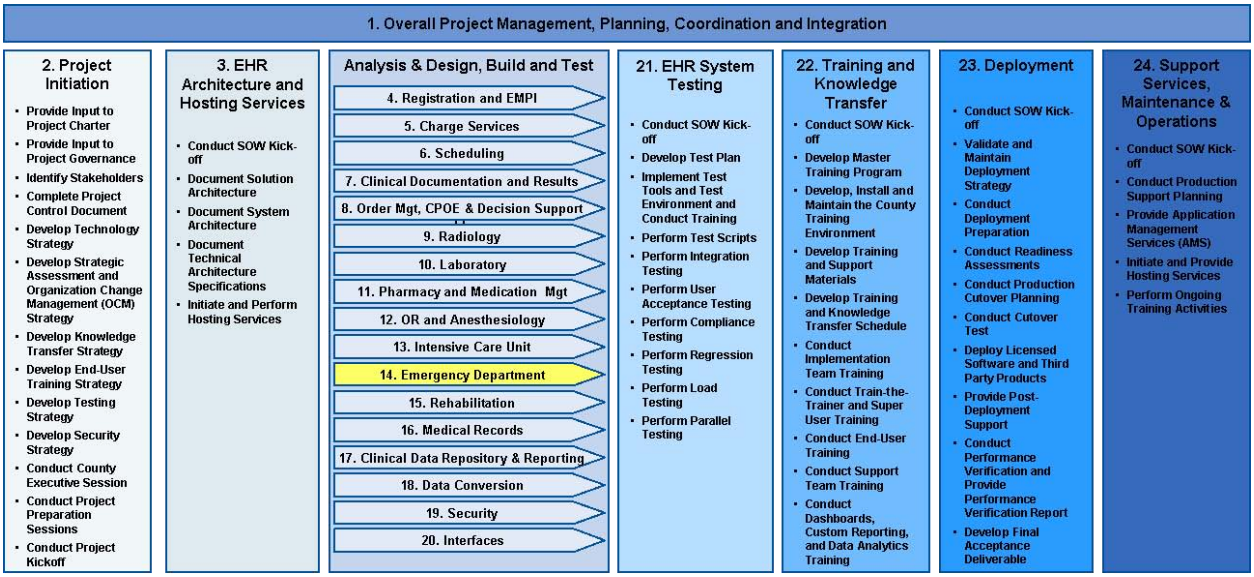
1. Introduction

This Exhibit A.14 (Emergency Department Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.14 (Emergency Department Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.14 (Emergency Department Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Emergency Department and Results as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Emergency Department, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- FirstNet – Emergency Department Triage and Tracking
- FirstNet – Emergency Department Care Management
- FirstNet – ED Coding & Physician Documentation License
- FirstNet – ED Summary MPage

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.14 (Emergency Department Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.14 (Emergency Department Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Emergency Department Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Emergency Department SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Emergency Department	Deliverable 1.1 SOW Sub-Project Work Plan - Emergency Department
Subtask 1.2 Conduct Initiation Session for Emergency Department Workgroup	Deliverable 1.2 Emergency Department Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection

Tasks/ Subtasks	Deliverables
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Emergency Department Workflow Workshop	Deliverable 4.4 Emergency Department Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Emergency Department Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Emergency Department
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found

in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Emergency Department-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Emergency Department Workgroup**" or "**County Workgroup**") and the County Emergency Department Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.

Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Emergency Department Architect;
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Emergency Department SOW Lead;
  ○ County Emergency Department Workgroup;
  ○ County Transformation Lead;
  ○ County Emergency Department Analyst;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect; and
  ○ Transformation Coordinator.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Emergency Department As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include an Emergency Department-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which	**Deliverable 1.1 Emergency Department Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Emergency Department specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Emergency Department specific sub-Project Work Plan.

includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.14 (Emergency Department Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for Emergency Department Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.14 (Emergency Department Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Emergency Department capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Emergency Department functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure	**Deliverable 1.2 Emergency Department Initiation Session** • Emergency Department Initiation Session materials for County review one (1) week prior to Emergency Department Initiation Session. • Initial list of County Domains, Venues and Locations for which Emergency Department capabilities must be delivered for review during Emergency Department Initiation Session. • Demonstration of Emergency Department functionality. • List of County Workgroup members who attended the Emergency Department Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Emergency Department Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Emergency Department Initiation Session. • Emergency Department Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome

success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	issues and barriers. **Acceptance Criteria:** • County-Approved Emergency Department Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Emergency Department Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports.	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the

• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	Agreement.
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Architect;
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Emergency Department SOW Lead;
  ○ County Emergency Department Analyst;
  ○ Transformation Lead/Coordinator;
  ○ County Emergency Department Workgroup; and
  ○ County Emergency Department SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, including devices and equipment, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations, including devices and equipment, for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, including devices and equipment, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and

Task 2 Conduct Current State Assessment	
Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Emergency Department workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** ● Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. ● County reviewed and Approved findings.
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Emergency Department components, the Contractor knowledge base, and expertise of Contractor SMEs. Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.	**Deliverable 2.3 Risk and Opportunities Documentation** ● Workflow assessment report including completed OWA tool and identified risks and opportunities report. ● Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving: ○ Efficiency; ○ Patient safety; ○ Quality of care; and ○ Patient experience. ● Recommendations for improved processes to manage Emergency Department.

Task 2 Conduct Current State Assessment	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.	• Documented County-Approved metrics to be utilized to determine success. • Recommendations for identifying implications with other workflows. • Recommendations for identifying industry best practices. • Recommendations for enhancing effective utilization of external services. • Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist; and
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.

Task 3 Conduct System Review	

• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Emergency Department SOW Lead;
  ○ County Emergency Department Workgroup;
  ○ County Emergency Department Analyst;
  ○ County Transformation Lead;
  ○ County Emergency Department SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct an Emergency Department demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Emergency Department Licensed Software integration requirements, current design decisions, with	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Emergency Department. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for

Task 3 Conduct System Review	
all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design. • Work with the County Workgroup to begin the initial population of the DCWs. • Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently. • Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup	subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda. • County-Approved System Review Session Event Summary Report. • Demonstration of Emergency Department covers all relevant County Domains, Venues, and Locations. • Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW. • Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	

documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for data collection and completion of design documents with County.
Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	

Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows:	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which

Task 3 Conduct System Review	
• Provide a Best Practice Emergency Department process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Emergency Department. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable. • Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County	includes current and final status of all risks and issues and date of resolution. • Best Practice Emergency Department process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Emergency Department processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM and DCWs. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). **Acceptance Criteria:** • Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions

Task 3 Conduct System Review	
SOW Lead. ● Weekly calls and/or meetings of at least sixty (60) minutes will: ○ Discuss progress compared to timelines documented in the Project Work Plan; and ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate. ● Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.	identified during the system review process. ● County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review). ● Identified issues are resolved and or closed.

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	
● Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Emergency Department Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect ● County Key Employees ○ County Project Director; ○ County Transformation Lead; ○ County Project Manager; ○ County Emergency Department Lead Analyst; and ○ County Emergency Department SOW Workgroup.	
Subtask 4.1 Conduct Design Review Session	**Deliverable 4.1**
The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants.	● List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). ● Completed and Contractor-confirmed DCWs. ● Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration.

Task 4 Conduct Design Review	
During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to	• Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Emergency Department workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps.

Task 4 Conduct Design Review	
Emergency Department. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Emergency Department and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Emergency Department data	• County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Emergency Department.	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for

Task 4 Conduct Design Review	
• Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	Emergency Department. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Emergency Department processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised.

Task 4 Conduct Design Review	

review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between Emergency Department workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Emergency Department processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Emergency Department;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions;
  ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures;
  ○ Recommendations for Emergency
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Emergency Department downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that:
	  ○ All County patient care activities and services are addressed; and
	  ○ Realistic strategies for achieving Best Practice standards are delineated.

Task 4 Conduct Design Review	
Department downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	• Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.
Subtask 4.4 Conduct Emergency Department Workflow Workshop Contractor will conduct Emergency Department Workflow Workshops as needed in which the future state workflows for Emergency Department will be demonstrated to County and decisions required for the design of Emergency Department functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Emergency Department. • Discuss the key decision points related to automation of capture and management of Emergency Department. • Document the key design decisions and desired outcomes related to Emergency Department in the DDMs.	**Deliverable 4.4 Emergency Department Workflow Workshop** • Agenda/Schedule for Emergency Department Workflow Workshops. • Attendance sheet/roster of participants for Emergency Department Workflow Workshop (agenda and presentation). • List of materials for Emergency Department Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Emergency Department Workflow Workshop

Task 4 Conduct Design Review	
• Document implication of key design decisions related to integration with existing third-party and County systems and Emergency Department in the DDMs. • Compare and contrast design elements for Emergency Department and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Emergency Department Domain. • At the end of the Emergency Department Workflow Workshop, Contractor will draft and finalize the Emergency Department Workflow Workshop Event Summary Report.	Event Summary Report and Issues Log. • Updated downtime strategies for Emergency Department. **Acceptance Criteria:** • County-Approved Emergency Department Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Emergency Department Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Emergency Department final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 4 Conduct Design Review	
Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Emergency Department SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Emergency Department Analyst;
  ○ County Emergency Department SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Emergency Department processes. Contractor will facilitate a review session with County in which it:	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System

Task 5 Complete Initial Partial System Build	
• Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Emergency Department. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation
Task Description
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Emergency Department and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Emergency Department Licensed Software.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Emergency Department SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Emergency Department Analyst;
  ○ County Emergency Department SOW Workgroup; and
  ○ County Emergency Department SMEs who represent the end-users from each Domain

Task 6 Conduct System Validation	
and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	
Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Emergency Department reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module).	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Emergency Department Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
• Conduct training sessions on the Emergency Department Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Emergency Department Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Emergency Department Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members.	

Task 6 Conduct System Validation	
• Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Emergency Department and Conduct System and Unit Testing	
Task Description	
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Emergency Department Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Emergency Department SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Emergency Department Analyst;
  ○ County Emergency Department SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Emergency Department Licensed Software functionality and content until the full build of Emergency Department content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality	**Deliverable 7.1 Complete System Build for Emergency Department** • Release Schedule. • Iterative releases of Emergency Department Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Emergency Department Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report.

Task 7 Complete Build of Emergency Department and Conduct System and Unit Testing	
delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Emergency Department Licensed Software has been fully configured to include all DDMs and DCWs related to Emergency Department.	• Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Emergency Department builds meet specifications as documented in the final Detailed Design Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions. • Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log. • County validation that Approved changes to address Omissions fully address the

Task 7 Complete Build of Emergency Department and Conduct System and Unit Testing	
Contractor Test Lead for entering into MethodM Online. • Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released. • Address identified Omissions as follows: ○ Document and verify the requirements to address the Omission in a consistent and structured format; ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	documented omission specifications. • County Approved gateway criteria for unit and system test completion.
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Emergency Department build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Emergency Department Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Emergency Department Licensed

Task 7 Complete Build of Emergency Department and Conduct System and Unit Testing	

change requests as part of the build release cycles.
• Support County in re-testing resolved defects deployed by Contractor.
• Jointly decide with County through the governance process when the Emergency Department build is ready for moving to Integration Testing, based on:
  ○ Completeness of functionality and content;
  ○ Severity of outstanding defects; and
  ○ Severity of outstanding change requests.
	Software.
	
	Acceptance Criteria:
	• Resolution of all outstanding defects defined as required for Emergency Department Licensed Software Acceptance.
	• Licensed Software Build Completion Document provided by Contractor and Approved by County.
	• Gateway criteria have either been achieved or exceptions documented and Approved by Project governance.
	• All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.15 (Rehabilitation Statement of Work)

to the

Electronic Health Records System and Services Agreement

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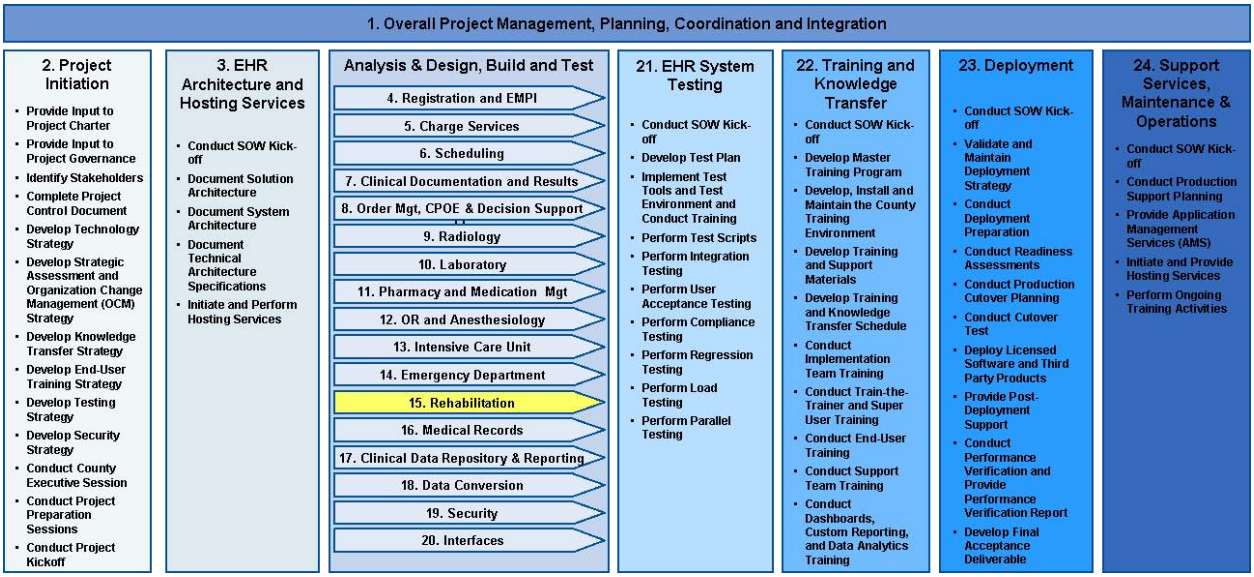
1. Introduction

This Exhibit A.15 (Rehabilitation Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.15 (Rehabilitation Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.15 (Rehabilitation Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Rehabilitation as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Rehabilitation, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Executable Knowledge for Rehabilitation (Inpatient)
- Executable Knowledge for Rehabilitation (Outpatient)

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a

fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.15 (Rehabilitation Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.15 (Rehabilitation Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Rehabilitation Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Rehabilitation SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Rehabilitation	Deliverable 1.1 SOW Sub-Project Work Plan - Rehabilitation
Subtask 1.2 Conduct Initiation Session for Rehabilitation Workgroup	Deliverable 1.2 Rehabilitation Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Rehabilitation Workflow Workshop	Deliverable 4.4 Rehabilitation Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)

Tasks/ Subtasks	Deliverables
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Rehabilitation Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Rehabilitation
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Rehabilitation-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Rehabilitation Workgroup**" or "**County Workgroup**") and the County Rehabilitation Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Rehabilitation Solution Architect;
  ○ Rehabilitation Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Rehabilitation SOW Lead;
  ○ County Rehabilitation Workgroup;
  ○ County Transformation Lead;
  ○ County Rehabilitation Analyst;

○ County Project Director; ○ County Project Manager; and ○ County Integration Architect.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Rehabilitation As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Rehabilitation-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.15 (Rehabilitation Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Rehabilitation Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Rehabilitation specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Rehabilitation-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Rehabilitation Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.15 (Rehabilitation Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows:	**Deliverable 1.2 Rehabilitation Initiation Session** • Rehabilitation Initiation Session materials for County review one (1) week prior to Rehabilitation Initiation Session. • Initial list of County Domains, Venues and Locations for which Rehabilitation capabilities must be delivered for review during Rehabilitation Initiation Session. • Demonstration of Rehabilitation functionality.

• Review and document Domains, Venues, and Locations for which Rehabilitation capabilities will be triggered and utilized within County (including external referral sources). • Demonstrate Rehabilitation functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and	• List of County Workgroup members who attended the Rehabilitation Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Rehabilitation Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Rehabilitation Initiation Session. • Rehabilitation Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Rehabilitation Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Rehabilitation Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives. • Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation. The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed. • Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests. • Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.

knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks. During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan. Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.	• Weekly updates demonstrate that, on an ongoing basis: ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and ○ Additional training is appropriate to achieve remediation for identified deficiencies. • Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals. • Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks. • Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment
Task Description
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.
Personnel Requirements
• Contractor Key Employees ○ Contractor Architect;

Task 2 Conduct Current State Assessment	
○ Contractor Rehabilitation Delivery Consultant; ○ Contractor Solution Architect; and ○ Contractor Clinical Strategist. • County Key Employees ○ County Rehabilitation SOW Lead; ○ County Rehabilitation Analyst; ○ County Rehabilitation Workgroup; ○ County Rehabilitation SMEs; ○ County Project Director; ○ County Transformation Lead; ○ County Integration Architect.	
Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment including devices and equipment e.g. seating pressure, audiology, remote monitoring, for the Workflow Assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations including devices and equipment e.g. seating pressure, audiology, remote monitoring, for the Workflow Assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, including devices and equipment (e.g., seating pressure, audiology, remote monitoring) is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations, including devices and equipment e.g. seating pressure, audiology, remote monitoring,.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Rehabilitation workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows.	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. • Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to

Task 2 Conduct Current State Assessment	

Contractor will document the assessment in the template-based structured OWA tool.
 	
Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated.
 	
Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed.
 	
Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy.
 	
County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.
	be recognized and addressed.
	
	• Workflows documented in sufficient detail to permit Contractor to:
	  ○ Compare to Best Practices; and
	  ○ Identify risks and opportunities as determined by County.
	
	Acceptance Criteria:
	
	• Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail.
	
	• County reviewed and Approved findings.

Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities
 	
Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Rehabilitation components, the Contractor knowledge base, and expertise of Contractor SMEs.
 	
Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation.
 	
Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.
	Deliverable 2.3 Risk and Opportunities Documentation
	
	• Workflow assessment report including completed OWA tool and identified risks and opportunities report.
	
	• Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving:
	  ○ Efficiency;
	  ○ Patient safety;
	  ○ Quality of care; and
	  ○ Patient experience.
	
	• Recommendations for improved processes to manage Rehabilitation.
	
	• Documented County-Approved metrics to be utilized to determine success.
	
	• Recommendations for identifying implications with other workflows.
	
	• Recommendations for identifying industry best practices.

Task 2 Conduct Current State Assessment	
	• Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Rehabilitation Delivery Consultant;
  ○ County Project Director;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Rehabilitation Analyst;
  ○ County Rehabilitation SOW Lead;
  ○ County Rehabilitation Workgroup; and
  ○ County Rehabilitation SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.

Subtasks/ Deliverables

Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Rehabilitation demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Rehabilitation Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Rehabilitation. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting

Task 3 Conduct System Review	

relevant WBTs have been completed and that learning objectives have been achieved.
• Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
	County personnel who have completed training and demonstrated competencies in the use of additional tools trained.
	• Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Rehabilitation covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Task 3 Conduct System Review	
○ Assessment of County's ability to complete the remaining data collection and design decisions; and ○ Report on the status of education by County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County . Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Rehabilitation process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Rehabilitation process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Rehabilitation processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as

Task 3 Conduct System Review	

with feedback and direction to improve the quality of data collected if needed.
• Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Rehabilitation.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	needed to complete documents at necessary level of detail on schedule.
	• Contractor Delivery Consultant support through ad hoc calls and e-mails.
	• Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Rehabilitation Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Rehabilitation Analyst;
  ○ County Project Director;
  ○ County Rehabilitation Lead;
  ○ County Rehabilitation Lead Analyst; and
  ○ County Rehabilitation SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Rehabilitation

Task 4 Conduct Design Review	
received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Rehabilitation. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Rehabilitation and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision.	workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Rehabilitation data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel.	

Task 4 Conduct Design Review	
• Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Rehabilitation. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above.	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Rehabilitation. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule.

Task 4 Conduct Design Review	
• Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	• Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Rehabilitation workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows. • Develop the following Deliverables: ○ Future State Workflow Diagrams	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Rehabilitation processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified. • A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics,

Task 4 Conduct Design Review	
covering the complete range of Rehabilitation processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems; ○ A list and examples of policies and procedures that will need to be created or revised; ○ Processes for maintaining and updating Rehabilitation; ○ Listing of suggested clinical pathways and decision support algorithms; ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Rehabilitation downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the	procedures for how to collect baseline data, track measures, and compare before and after performance. • Recommendations for Rehabilitation downtime strategies and documentation, including samples based on County build of Licensed Software. • Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. **Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Rehabilitation Workflow Workshop Contractor will conduct Rehabilitation Workflow Workshops as needed in which the future state workflows for Rehabilitation will be demonstrated to County and decisions required for the design of Rehabilitation functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Rehabilitation. • Discuss the key decision points related to automation of capture and management of Rehabilitation. • Document the key design decisions and desired outcomes related to Rehabilitation in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Rehabilitation in the DDMs. • Compare and contrast design elements for Rehabilitation and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel.	**Deliverable 4.4 Rehabilitation Workflow Workshop** • Agenda/Schedule for Rehabilitation Workflow Workshops. • Attendance sheet/roster of participants for Rehabilitation Workflow Workshop (agenda and presentation). • List of materials for Rehabilitation Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Rehabilitation Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Rehabilitation. **Acceptance Criteria:** • County-Approved Rehabilitation Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
• Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Rehabilitation Domain. • At the end of the Rehabilitation Workflow Workshop, Contractor will draft and finalize the Rehabilitation Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Rehabilitation Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Rehabilitation final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.

Task 5 Complete Initial Partial System Build	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Rehabilitation Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Rehabilitation SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Rehabilitation Analyst; and
  ○ County Rehabilitation SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Rehabilitation processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Rehabilitation.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the

Task 5 Complete Initial Partial System Build	
Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Rehabilitation and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Rehabilitation Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Rehabilitation Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Rehabilitation SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Rehabilitation Analyst;
  ○ County Rehabilitation SOW Workgroup; and
  ○ County Rehabilitation SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to:	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Rehabilitation Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between

Task 6 Conduct System Validation	
• Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Rehabilitation reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Rehabilitation Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation	DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Rehabilitation Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Rehabilitation Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data.	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality

Task 6 Conduct System Validation	
Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Rehabilitation and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;

Task 7 Complete Build of Rehabilitation and Conduct System and Unit Testing	
○ Contractor Rehabilitation Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; ○ Contractor Integration Architect; and ○ Contractor Test Lead. • County Key Employees ○ County Rehabilitation SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Rehabilitation Analyst; and ○ County Rehabilitation SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Rehabilitation Licensed Software functionality and content until the full build of Rehabilitation content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete	**Deliverable 7.1 Complete System Build for Rehabilitation** • Release Schedule. • Iterative releases of Rehabilitation Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Rehabilitation Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Rehabilitation builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Rehabilitation and Conduct System and Unit Testing	
Build, and alert County of any issues or risks. • Notify County when the Rehabilitation Licensed Software has been fully configured to include all DDMs and DCWs related to Rehabilitation.	

Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests
As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**").
Contractor will:
• Provide ad hoc telephone, e-mail, and in-person support to the County testing teams.
• Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc.
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions.
• Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online.
• Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released.
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new
	Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests
	• Updated Release Schedules.
	• Specifications for requested additions of content and functionality.
	• Defect resolution document describing identified defects and Omissions which have been resolved.
	• Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved.
	• Implementation of defect resolutions and County-Approved change requests.
	• Gateway criteria for Unit and System Test completion.
	
	Acceptance Criteria:
	• County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log.
	• County validation that Approved changes to address Omissions fully address the documented omission specifications.
	• County Approved gateway criteria for unit and system test completion.

content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Rehabilitation build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Rehabilitation build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Rehabilitation Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Rehabilitation Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Rehabilitation Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain,

Task 7 Complete Build of Rehabilitation and Conduct System and Unit Testing	
○ Severity of outstanding change requests.	but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.16 (Medical Records Statement of Work)

to the

Electronic Health Records System and Services Agreement

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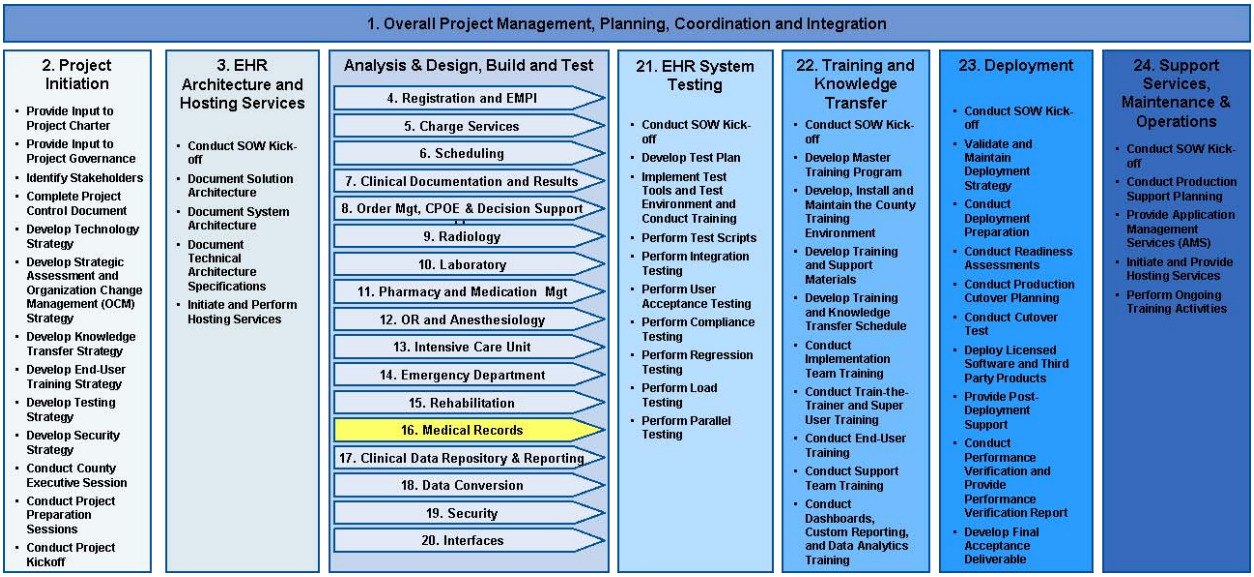
1. Introduction

This Exhibit A.16 (Medical Records Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.16 (Medical Records Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.16 (Medical Records Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Medical Records as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Medical Records, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Cerner Health Information Management
- HIM – Chart Deficiency and Management
- HIM – Chart Location and Patient Care Chart Requests
- HIM - Coding and Abstracting (with PC Encoder Interface)
- HIM – Release of Information

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined –Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.16 (Medical Records Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.16 (Medical Records Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Medical Records Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Medical Records SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Medical Records	Deliverable 1.1 SOW Sub-Project Work Plan - Medical Records
Subtask 1.2 Conduct Initiation Session for Medical Records Workgroup	Deliverable 1.2 Medical Records Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents

Tasks/ Subtasks	Deliverables
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Medical Records Workflow Workshop	Deliverable 4.4 Medical Records Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Medical Records Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Medical Records
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Medical Records-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Medical Records Workgroup**" or "**County Workgroup**") and the County Medical Records Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor;
  ○ Medical Records Architect;

○ Contractor Medical Records Delivery Consultant; ○ Integration Architect; and ○ Clinical Strategist. • County Key Employees ○ County Medical Records SOW Lead; ○ County Medical Records Workgroup; ○ County Transformation Lead; ○ County Medical Records Analyst; ○ County Project Director; ○ County Project Manager; and ○ County Integration Architect.

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Medical Records As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Medical Records-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.16 (Medical Records Statement of Work) and subject to County Approval**.**	**Deliverable 1.1 Medical Records Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Medical Records specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Medical Records-specific sub-Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Medical Records Workgroup	**Deliverable 1.2 Medical Records Initiation Session** • Medical Records Initiation Session materials

Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.16 (Medical Records Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Medical Records capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Medical Records (coding, release of Information, abstraction, deficiency review, etc.) functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g)	for County review one (1) week prior to Medical Records Initiation Session. • Initial list of County Domains, Venues and Locations for which Medical Records capabilities must be delivered for review during Medical Records Initiation Session. • Demonstration of Medical Records functionality. • List of County Workgroup members who attended the Medical Records Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Medical Records Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Medical Records Initiation Session. • Medical Records Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Medical Records Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation

guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Medical Records Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including progress status for each trainee. • Supporting the County education coordinator in running Education Tracker Reports. • Managing and reporting on the progress of learning activities and logging issues on MethodM. • Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Provided telephone and e-mail support to County personnel as specified in the Agreement. **Acceptance Criteria** • Effective training by Contractor of County personnel on the tasks to be completed.

• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
 	
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
 	
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
 	
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	
	• Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts.
	
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	
	• Approval by County of County Workgroup readiness to use training tools.
	
	• County SOW Lead Approval of updated learning objectives.
	
	• Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	
• Contractor Key Employees ○ Contractor Medical Records Delivery Consultant; ○ Contractor Solution Architect; and ○ Contractor Clinical Strategist. • County Key Employees ○ County Medical Records SOW Lead; ○ County Medical Records Analyst; ○ County Medical Records Workgroup; ○ County Medical Records SMEs; ○ County Project Director; and ○ County Integration Architect.	
Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead regarding scheduling.	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Medical Records workflow processes and provide the framework	**Deliverable 2.2 Workflow Assessment** • Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and

Task 2 Conduct Current State Assessment	
and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** ● Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. ● County reviewed and Approved findings.
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Medical Records components, the Contractor knowledge base, and expertise of Contractor SMEs. Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation. Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.	**Deliverable 2.3 Risk and Opportunities Documentation** ● Workflow assessment report including completed OWA tool and identified risks and opportunities report. ● Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving: ○ Efficiency; ○ Patient safety; ○ Quality of care; and ○ Patient experience. ● Recommendations for improved processes to manage Medical Records. ● Documented County-Approved metrics to be utilized to determine success. ● Recommendations for identifying implications with other workflows.

Task 2 Conduct Current State Assessment	
	• Recommendations for identifying industry best practices. • Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Medical Records Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor Solution Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Integration Architect;
  ○ County Medical Records Analyst;
  ○ County Medical Records SOW Lead;
  ○ County Medical Records Workgroup; and

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○ County Medical Records SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	
Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Medical Records demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to be used in the design and build process. • Conduct a review of the Medical Records Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Medical Records. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM.

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comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead.
• Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved.
• Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions.
• Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design.
• Work with the County Workgroup to begin the initial population of the DCWs.
• Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County
	• Documentation of next steps.
	• Provide updated learning plan document.
	• Project Status Reports.
	• Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained.
	• Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track.
	
	Acceptance Criteria:
	• County-Approved System Review Session agenda.
	• County-Approved System Review Session Event Summary Report.
	• Demonstration of Medical Records covers all relevant County Domains, Venues, and Locations.
	• Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress.
	• System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

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counterpart to add additional follow-up items; ○ Tasks from the Project Work Plan for specific solution; ○ Assessment of County's ability to complete the remaining data collection and design decisions; and ○ Report on the status of education by County personnel. • Incorporate County input and review the System Review Session Event Summary Report with County • Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities. • Identify, document, and review next steps for data collection and completion of design documents with County. Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.	
Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Medical Records process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor. • Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Medical Records process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Medical Records processes. • Update Risks and Issue Matrix related to the

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issues.
• Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed.
• Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM
• Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Medical Records.
• Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources).
• Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
• Contractor Delivery Consultant will be available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix
	completion of DDM and DCWs with alerts to County of any risks to schedule.
	• Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule.
	• Contractor Delivery Consultant support through ad hoc calls and e-mails.
	• Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation.
	• Documented decisions made related to DDM and DCWs.
	• Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources).
	• Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).
	
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

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related to the completion of DDMs and DCWs and alert County of any risks to schedule.	

Task 4 Conduct Design Review	
Task Description	
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Medical Records Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Medical Records Lead Analyst; and
  ○ County Medical Records SOW Workgroup.	

Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible

Task 4 Conduct Design Review	
will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Medical Records. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Medical Records and other related SOWs to	Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Medical Records workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

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date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build. • Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Medical Records data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress,	

Task 4 Conduct Design Review	
as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Medical Records. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g.,	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Medical Records. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation

Task 4 Conduct Design Review	
through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed and in-process issues have current updates.
Subtask 4.3 Conduct Workflow Localization The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy. Contractor will: • Draft an agenda for meetings that will be held at County facilities and departments for review by the County. • Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables. • Conduct crosswalk between Medical Records workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks. • Work with County personnel to identify necessary and recommended changes to	**Deliverable 4.3 Workflow Localization Documents** • List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials). • Future State Workflow Diagrams covering the complete range of Medical Records processes impacted by the Licensed Software. • A list and examples of policies and procedures that will need to be created or revised. • Listing of suggested decision support algorithms. • Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices. • Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.

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policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Medical Records processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Medical Records;
  ○ Listing of suggested clinical pathways and decision support algorithms;
  ○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices;
  ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions;
  ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures;
  ○ Recommendations for Medical Records downtime and recovery strategies, including samples; and
  ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor.
Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Medical Records downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.
	
	Acceptance Criteria:
	• County Approved Workflow Localization Documents.
	• Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process.
	• Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that:
	  ○ All County patient care activities and services are addressed; and
	  ○ Realistic strategies for achieving Best Practice standards are delineated.
	• Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location.
	• Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	
Subtask 4.4 Conduct Medical Records Workflow Workshop Contractor will conduct Medical Records Workflow Workshops as needed in which the future state workflows for Medical Records will be demonstrated to County and decisions required for the design of Medical Records functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Medical Records. • Discuss the key decision points related to automation of capture and management of Medical Records. • Document the key design decisions and desired outcomes related to Medical Records in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Medical Records in the DDMs. • Compare and contrast design elements for Medical Records and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process.	**Deliverable 4.4 Medical Records Workflow Workshop** • Agenda/Schedule for Medical Records Workflow Workshops. • Attendance sheet/roster of participants for Medical Records Workflow Workshop (agenda and presentation). • List of materials for Medical Records Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Medical Records Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Medical Records. **Acceptance Criteria:** • County-Approved Medical Records Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and

Task 4 Conduct Design Review	
• Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Medical Records Domain. • At the end of the Medical Records Workflow Workshop, Contractor will draft and finalize the Medical Records Workflow Workshop Event Summary Report.	design decisions.
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Medical Records Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Medical Records final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build	
Task Description	
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Medical Records Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect;
• County Key Employees
  ○ County Medical Records SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Medical Records Analyst; and
  ○ County Medical Records SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Medical Records processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.

Task 5 Complete Initial Partial System Build	
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Medical Records. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Medical Records and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Medical Records Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Medical Records Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Medical Records SOW Lead;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ County Medical Records Analyst;
  ○ County Medical Records SOW Workgroup; and
  ○ County Medical Records SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Medical Records Licensed

Task 6 Conduct System Validation	
Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain. • Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Medical Records reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Medical Records Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and	Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain). • Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Medical Records Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Medical Records Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session,	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts.

Task 6 Conduct System Validation	
Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will: • Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	• Test data loaded into test environment database. • Documented risks to schedule or to quality and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Medical Records and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.

Task 7 Complete Build of Medical Records and Conduct System and Unit Testing	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Medical Records Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect; and
  ○ Contractor Test Lead.
• County Key Employees
  ○ County Medical Records SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Medical Records Analyst; and
  ○ County Medical Records SOW Workgroup.	

Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Medical Records Licensed Software functionality and content until the full build of Medical Records content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions.	**Deliverable 7.1 Complete System Build for Medical Records** • Release Schedule. • Iterative releases of Medical Records Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects. applicable to County that have been corrected by the release. • Complete Build of Medical Records Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Medical Records builds meet specifications as documented in the final Detailed Design

Task 7 Complete Build of Medical Records and Conduct System and Unit Testing	
• Provide test scripts to validate release of new functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Medical Records Licensed Software has been fully configured to include all DDMs and DCWs related to Medical Records.	Document.
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions. • Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online. • Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released. • Address identified Omissions as follows: ○ Document and verify the requirements to address the Omission in a consistent and	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log. • County validation that Approved changes to address Omissions fully address the documented omission specifications. • County Approved gateway criteria for unit and system test completion.

structured format; ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. • Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. • Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Medical Records build as documented in the DCWs and DDMs is complete. Contractor will: • Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. • Release defect resolutions and implemented change requests as part of the build release cycles. • Support County in re-testing resolved defects deployed by Contractor. • Jointly decide with County through the governance process when the Medical Records build is ready for moving to Integration Testing, based on:	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** • Documented results of completed and tested Medical Records Licensed Software. • List of resolved defects, including date of completion, retest results, and County Approval. • County-Approved completed Unit and System Testing for Medical Records Licensed Software. **Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Medical Records Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and

Task 7 Complete Build of Medical Records and Conduct System and Unit Testing	
○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work)

to the

Electronic Health Records System and Services Agreement

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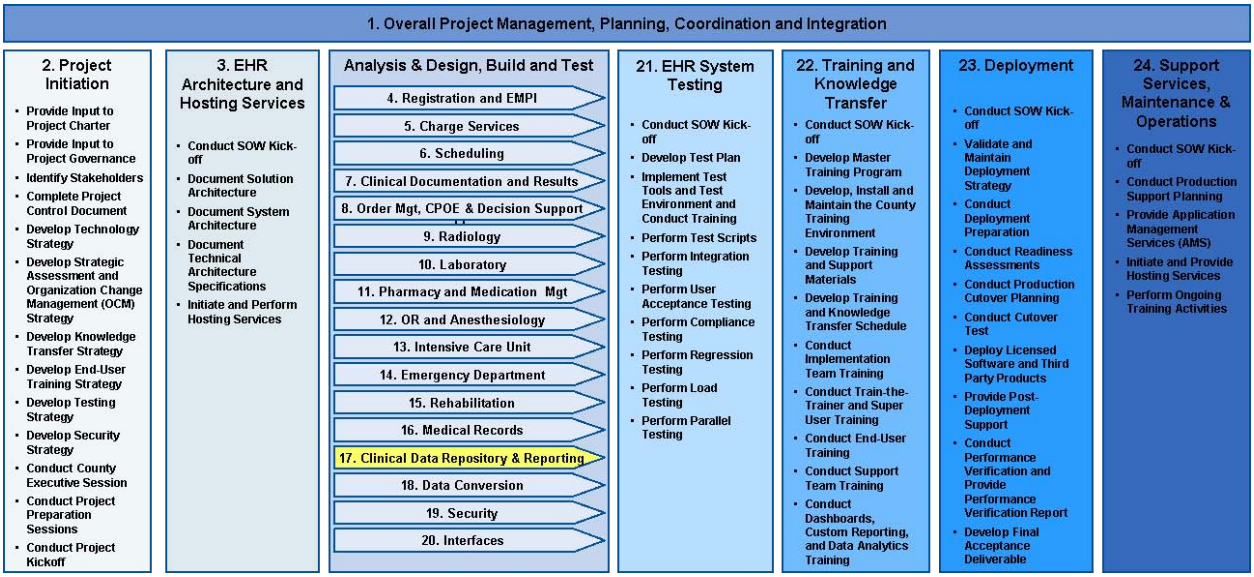
1. Introduction

This Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Clinical Data Repository and Reporting as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Clinical Data Repository and Reporting, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will to be accommodated.

3. SOW Summary

3.1 Overview

This SOW will result in the configuration and implementation of the following Contractor modules:

- Clinical Data Repository
- Clinical Reporting

It will include the design, build, and as applicable, Interface setup, and any needed data migration from the Existing System that will be displaced by the new EHR System components.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide

County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provide the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provide the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Clinical Data Repository and Reporting Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones, and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly status reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Clinical Data Repository and Reporting SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Tasks/ Subtasks	Deliverables
Task 1 Conduct SOW Kick-Off/ Mobilization	
Subtask 1.1 Develop Detailed Sub-Project Work Plan - Clinical Data Repository and Reporting	Deliverable 1.1 SOW Sub-Project Work Plan - Clinical Data Repository and Reporting
Subtask 1.2 Conduct Initiation Session for Clinical Data Repository and Reporting Workgroup	Deliverable 1.2 Clinical Data Repository and Reporting Initiation Session (Key Deliverable)
Subtask 1.3 Conduct Comprehension Exercises	Deliverable 1.3 Progress Report on Comprehension Exercises
Task 2 Conduct Current State Assessment	
Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment
Subtask 2.2 Conduct Workflow Assessment	Deliverable 2.2 Workflow Assessment
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities	Deliverable 2.3 Risk and Opportunities Documentation
Task 3 Conduct System Review	
Subtask 3.1 Conduct System Review Session	Deliverable 3.1 System Review Session Documents
Subtask 3.2 Perform System Review Data Collection (System Review Follow-Up)	Deliverable 3.2 System Review Data Collection

Tasks/ Subtasks	Deliverables
Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session	Deliverable 4.1 Design Session Documents
Subtask 4.2 Conduct Design Review Session Follow-Up	Deliverable 4.2 System Design Data Collection
Subtask 4.3 Conduct Workflow Localization	Deliverable 4.3 Workflow Localization Documents
Subtask 4.4 Conduct Clinical Data Repository and Reporting Workflow Workshop	Deliverable 4.4 Clinical Data Repository and Reporting Workflow Workshop
Subtask 4.5 Develop Final Detailed Design Document	Deliverable 4.5: Final Detail Design Document (Key Deliverable)
Task 5 Complete Partial System Build	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build	Deliverable 5.1 Initial Partial System Build Specification
Subtask 5.2 Complete Initial Partial Build	Deliverable 5.2 Initial Partial System Build
Task 6 Conduct System Validation	
Subtask 6.1 Conduct System Validation Session	Deliverable 6.1 System Validation
Subtask 6.2 Conduct System Validation Session Follow-up	Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing
Task 7 Complete Build of Clinical Data Repository and Reporting Modules and Conduct Unit and System Testing	
Subtask 7.1 Complete System Build	Deliverable 7.1 Complete System Build for Clinical Data Repository and Reporting
Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	Subtask 7.2 Resolved Defects and Implement County Approved Change Requests
Subtask 7.3 Complete Unit and System Testing	Deliverable 7.3 Tested Complete System Build Ready For Integration Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found

in Section 5.3 (Project Deliverable Expectations Document (DED) Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-Off / Mobilization
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Clinical Data Repository and Reporting-specific training on the Licensed Software and Third Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Clinical Data Repository and Reporting Workgroup**" or "**County Workgroup**") and the County Clinical Data Repository and Reporting Workgroup will be

introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Clinical Data Repository and Reporting Architect;
  ○ Contractor Clinical Data Repository and Reporting Delivery Consultant;
  ○ Integration Architect; and
  ○ Clinical Strategist.
• County Key Employees
  ○ County Clinical Data Repository and Reporting SOW Lead;
  ○ County Clinical Data Repository and Reporting Workgroup;
  ○ County Transformation Lead;
  ○ County Clinical Data Repository and Reporting Analyst;
  ○ County Project Director;
  ○ County Integration Architect; and
  ○ County Integration Architect.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan – Clinical Data Repository and Reporting As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Clinical Data Repository and Reporting-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks; • Resources (hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; • County Deliverable review period; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to	**Deliverable 1.1 Clinical Data Repository and Reporting Sub-Project Work Plan – Including All Elements Described in Subtask 1.1** **Acceptance Criteria:** • County-Approved Clinical Data Repository and Reporting specific sub-Project Work Plan. • Timelines detailed in Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this SOW and other SOWs. • Confirmed availability of Contractor resources required to implement the Project Work Plan and Clinical Data Repository and Reporting-specific sub-Project Work Plan.

create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work) and subject to County Approval**.**	
Subtask 1.2 Conduct Initiation Session for Clinical Data Repository and Reporting Workgroup Contractor will conduct an initiation session to introduce the County Workgroup to the Services covered by this Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work), including the time lines and nature of the work effort that will be required to implement this SOW. Contractor will conduct the initiation session as follows: • Review and document Domains, Venues, and Locations for which Clinical Data Repository and Reporting capabilities will be triggered and utilized within County (e.g., disciplines, service lines, ambulatory vs. inpatient, etc.) • Demonstrate Clinical Data Repository and Reporting functionality using a generic version of the Licensed Software that will be configured for use by County (also known as the "**Open House Domain**"). • Provide training materials and hands on training to the County Workgroup in the use of the Open House Domain, and identify learning expectations and objectives of Open House Domain use. • Train County Workgroup on the Web Based Training tool (also referred to as a "**WBT**") and provide instructions for the County Workgroup to obtain support during self-learning exercises. • Conduct the Leading Strategic Change Workshop to: (a) improve County's ability to create an organizational change campaign to influence behaviors and realize benefits; (b) define and execute effective change strategies; (c) guide County through the	**Deliverable 1.2 Clinical Data Repository and Reporting Initiation Session** • Clinical Data Repository and Reporting Initiation Session materials for County review one (1) week prior to Clinical Data Repository and Reporting Initiation Session. • Initial list of County Domains, Venues and Locations for which Clinical Data Repository and Reporting capabilities must be delivered for review during Clinical Data Repository and Reporting Initiation Session. • Demonstration of Clinical Data Repository and Reporting functionality. • List of County Workgroup members who attended the Clinical Data Repository and Reporting Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • List of identified and validated learning objectives for County Workgroup learning plan. • An Education Tracker to monitor and manage completion of learning objectives, including a summary report on progress and issues logged on MethodM Online. • Log-in credentials to all relevant tools and sites (Open House Domain, MethodM Online) for both participants of the Clinical Data Repository and Reporting Initiation Session and other County stakeholders as mutually agreed upon. • Written instructions and documentation for County Workgroup members to familiarize themselves with materials covered in the Clinical Data Repository and Reporting Initiation Session.

process of introducing and managing change in the organization; (d) review necessary skills, tools, techniques, measurements, and processes to ensure success in managing change; (e) identify strategies to prepare end users for implementation of the Licensed Software; (f) review the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users; and (g) guide County in the preparation of the initial learning plan document. • Train the County Workgroup on the required process and tools used to support Contractor in conducting the workflow assessment, purpose and expected outcome of the workflow assessment, and related activities. • Present and refine learning objectives and work with the County SOW Lead to ensure that learning objectives are understood. • Identify and address issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. • Provide the County Workgroup with an overview of MethodM including system design review activities and data collection processes.	• Clinical Data Repository and Reporting Initiation Session Event Summary Report • List of issues and barriers that may be in the way of achieving learning objectives and provide County with support to overcome issues and barriers. **Acceptance Criteria:** • County-Approved Clinical Data Repository and Reporting Initiation Session Event Summary Report from Contractor documenting that initiation session has been completed and includes accurate documentation of the content, outcomes, and next steps agreed upon at the Initiation Session. • Agreed upon and understood learning objectives for County personnel and Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.
Subtask 1.3 Conduct Comprehension Exercises Subsequent to the Clinical Data Repository and Reporting Initiation Session, Contractor will support the County Workgroup in developing an understanding of and applying knowledge as needed including: • Providing scripts for use by the County Workgroup for training/education exercises. • Monitoring the use of WBTs, and review of MethodM Online. • Providing telephone and e-mail support to County personnel. • Monitoring the Education Tracker for each County workgroup and activity, including	**Deliverable 1.3 Progress Report on Comprehension Exercises** • Open House Domain scripts. • Progress Report on comprehension exercises. • Education Tracker demonstrates successful completion of all learning objectives by all County participants. • Validation by Contractor that County personnel have completed WBTs and Open House Domain scripts. • Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved. • Approval by County of County Workgroup

progress status for each trainee.
• Supporting the County education coordinator in running Education Tracker Reports.
• Managing and reporting on the progress of learning activities and logging issues on MethodM.
• Providing the County SOW Lead with advice and direction to enhance County's achievement of learning objectives.
• Providing on-site follow up when the County SOW Lead identifies a substantive or wide spread execution issue that reflects a lack of understanding or ability of County's personnel to execute, and that may be remedied with additional training or orientation.
The Contractor Delivery Consultant will report progress to County on a weekly basis on County's success, or lack thereof, in applying knowledge from the initiation sessions, and its observable progress, or lack thereof, in using that knowledge in completing implementation tasks.
During comprehension exercises, Contractor will work with the County SOW Lead and the County Workgroup to adjust/add activities and plans if progress is behind the goals stated in the Project Work Plan.
Contractor will provide additional training on an as-needed and/or requested basis for the County Workgroup members to ensure that the County Workgroup members have sufficient understanding of tools and methodologies to complete subsequent tasks in a timely manner to meet the Project Schedule.
	readiness to use training tools.
	• County SOW Lead Approval of updated learning objectives.
	• Provided telephone and e-mail support to County personnel as specified in the Agreement.
	
	Acceptance Criteria
	• Effective training by Contractor of County personnel on the tasks to be completed.
	• Complete and successful access to Open House Domain and MethodM Online by the County Workgroup with no outstanding training requests.
	• Education Tracker demonstrates ongoing education of County Workgroup members sufficient to ensure successful completion of subsequent tasks as outlined in this and other applicable SOWs, as determined by County.
	• Weekly updates demonstrate that, on an ongoing basis:
	  ○ Deficiencies in educational progress by County Workgroup members are expeditiously identified; and
	  ○ Additional training is appropriate to achieve remediation for identified deficiencies.
	• Weekly updated Education Tracker, including update on risks and issues as well as consequences if trainees do not meet expected goals.
	• Availability of necessary and agreed upon supplemental support for County personnel to enable effective delivery by County personnel of assigned tasks.
	• Validation by Contractor that County personnel have completed provided WBTs and Open House Domain scripts.
	• Validation by Contractor that all relevant WBTs have been completed and that learning objectives have been achieved.
	• Approval by County of County Workgroup

	readiness to use training tools. • County SOW Lead Approval of updated learning objectives. • Agreed-upon and understood learning objectives for County personnel have been met as evidenced by completion of WBTs and Open House Domain Scripts.

Task 2 Conduct Current State Assessment	
Task Description	
Contractor will conduct an assessment of County's current workflows and processes to gain an understanding of County's unique workflows and process flows and recommend workflow practices based on Contractor's workflow model and Best Practices. The assessment will identify and document Project risks and opportunities in preparation for future data collection and design activities. The assessment will be documented in the Onsite Workflow Assessment (also known as "**OWA**") tools in MethodM Online and provide input into the activities during the system and design review tasks.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Clinical Data Repository and Reporting Delivery Consultant
  ○ Contractor Solution Architect; and
  ○ Contractor Clinical Strategist.
• County Key Employees
  ○ County Clinical Data Repository and Reporting SOW Lead;
  ○ County Clinical Data Repository and Reporting Analyst
  ○ County Clinical Data Repository and Reporting Workgroup; and
  ○ County Clinical Data Repository and Reporting SMEs.	

Subtasks/ Deliverables	
Subtask 2.1 Identify and Document Domains, Venues and Locations of Workflow Assessment Contractor will provide County with a list of proposed Domains, Venues and Locations, for the workflow assessment across all DHS Clusters. Based on County input, Contractor will finalize the list of Domains, Venues and Locations for the workflow assessment for County's final review and Approval. County SOW Lead will schedule the workflow assessment and Contractor Delivery Consultant will coordinate with the County SOW Lead	**Deliverable 2.1 List of Domains, Venues, and Locations for Workflow Assessment** • List of Domains, Venues and Locations across all DHS Clusters. **Acceptance Criteria** • List of Domains, Venues and Locations, is complete and consistent with County input and the agreements by County and Contractor. • County Approval of finalized list of Domains, Venues, and Locations.

Task 2 Conduct Current State Assessment	
regarding scheduling.	
Subtask 2.2 Conduct Workflow Assessment In each of the Domains, Venues, and Locations identified, Contractor will meet with the County Workgroup and County subject matter experts (also referred to as "**SMEs**") to walk through and document at a high level current Clinical Data Repository and Reporting workflow processes and provide the framework and requirements for design as necessary to provide an overview of changes which will be required by recommended new workflows. Contractor will document the assessment in the template-based structured OWA tool. Contractor will continuously update the OWA tool on MethodM Online with information from each Domain, Venue, and Location, as the assessment templates are populated. Contractor will identify interrelationships with work processes in other SOWs, and across Domains, Venues, and Locations, that need to be recognized and addressed. Contractor will regularly review the assessments documented in the OWA tool with County SMEs for completeness and accuracy, and County will provide input on how to improve completeness and accuracy. County will Approve completed updates and additions that have been posted and addressed as new information regarding Domains, Venues, and Locations is identified over the course of the assessment.	**Deliverable 2.2 Workflow Assessment** ● Documented findings of OWA for all identified and verified Domains, Venues, and Locations, including, but not limited to: ○ Worksheets; ○ Recommended workflows; and ○ Key County requirements. ● Documented interrelationships with other SOW workflows (e.g., order management, scheduling and medical records) that need to be recognized and addressed. ● Workflows documented in sufficient detail to permit Contractor to: ○ Compare to Best Practices; and ○ Identify risks and opportunities as determined by County. **Acceptance Criteria:** ● Reviewed and finalized OWA posted on MethodM Online capturing the agreed workflow processes at the agreed level of detail. ● County reviewed and Approved findings.
Subtask 2.3 Review Current DHS Workflows and Processes to Identify Risks and Opportunities Contractor will analyze the findings of the OWA activity, including the OWA visit notes, and identify and document risks and opportunities which could result from implementing the Licensed Software using Best Practices and capabilities provided by the Clinical Data Repository and Reporting components, the Contractor knowledge base, and expertise of	**Deliverable 2.3 Risk and Opportunities Documentation** ● Workflow assessment report including completed OWA tool and identified risks and opportunities report. ● Risks and Opportunities Documentation, located on a discrete SOW-specific section of MethodM Online, includes recommendations that have a high likelihood of improving: ○ Efficiency;

Task 2 Conduct Current State Assessment	
Contractor SMEs. Contractor Clinical Strategist will review the assessment results with County Workgroup and provide recommendations in a Risk and Opportunities Documentation. Contractor will report and identify gaps in functionality from the Licensed Software as it relates to current County workflows.	○ Patient safety; ○ Quality of care; and ○ Patient experience. • Recommendations for improved processes to manage Clinical Data Repository and Reporting. • Documented County-Approved metrics to be utilized to determine success. • Recommendations for identifying implications with other workflows. • Recommendations for identifying industry best practices. • Documented risks. **Acceptance Criteria:** • County Approval of the Risk and Opportunities Documentation. • County acknowledgement that originally defined areas of workflow assessment have been accurately assessed. • Risks and Opportunities Documentation demonstrates substantial detail and breadth of scope as determined by County. • County Approval of opportunities to be implemented and the metrics to be utilized to determine success.

Task 3 Conduct System Review
Task Description
Contractor will provide a guided overview of the solution relative to Contractor's recommended workflows (based upon the OWA tool). Contractor will introduce, train, and support the County Workgroup in data collection tasks required for the design and build process. Contractor will provide a demonstration of the Licensed Software, including recommended operational workflows. Small group sessions with County Workgroup members and Contractor's solution experts will be conducted in order develop a solution blueprint and database build plan and engage in knowledge-sharing opportunities.
Personnel Requirements
• Contractor Key Employees ○ Contractor Clinical Data Repository and Reporting Delivery Consultant;

Task 3 Conduct System Review	
○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Clinical Strategist; ○ Contractor Integration Architect; and ○ Contractor Solution Architect. • County Key Employees ○ County Project Director; ○ County Project Manager; ○ County Integration Architect; ○ County Clinical Data Repository and Reporting SOW Lead; ○ County Clinical Data Repository and Reporting Workgroup; ○ County Clinical Data Repository and Reporting SMEs who represent the end-users from each Domain. These SMEs should have a solid understanding of the workflow in their area of expertise.	
Subtasks/ Deliverables	
Subtask 3.1 Conduct System Review Session The System Review Session is a week-long event held in Kansas City or Los Angeles as determined by County and Contractor. Prior to the System Review Session, Contractor will provide a detailed agenda, including expectations of the County participants and anticipated post-event work to be completed by County participants. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the System Review Session, Contractor will: • Conduct a Clinical Data Repository and Reporting demonstration for multiple work settings and across disciplines and interdisciplinary work teams, including integrated solution workflow discussions and recommended design practices. • Demonstrate the information gathering tools and materials used to facilitate the solution design and build process. • Provide hands on training on Contractor's information gathering tools and materials to	**Deliverable 3.1 System Review Session Documents** • List of participants and copies of all materials used for System Review Session (agenda and presentation). • List of educational objectives for System Review Session. • Benefits Presentation for System Review Session. • DCWs. • DDM on MethodM Online. • Recommended plan for achieving any outstanding learning objectives which have not been completed. • System Review Session Event Summary Reports with County identified and agreed upon tasks for the County Workgroup • Completed demonstration of Clinical Data Repository and Reporting. • Verbal and written review of System Review Session Event Summary Report with County. • List of training for information gathering tools and design/build process. • List of integration requirements with documentation of areas requiring integration

Task 3 Conduct System Review	
be used in the design and build process. • Conduct a review of the Clinical Data Repository and Reporting Licensed Software integration requirements, current design decisions, with all of the SOW workgroups together and then specific SOW workgroup teams separately (including resolution of areas of interdependencies and interrelationships, such as organizations and locations). • Validate that County personnel have completed Open House Domain Scripts provided by Contractor during comprehension exercises and provide weekly updates on status and quality of submitted materials to the County SOW Lead. • Using the Education Tracker, validate that all relevant WBTs have been completed and that learning objectives have been achieved. • Review and discuss documented outcomes included in the OWA tool and the Risk and Opportunities Report with County personnel to optimize design decisions. • Review and provide training on the tools, processes, and objectives for the upcoming data collection activities and demonstrate how the County Workgroup will use them to perform its specific tasks related to this activity – the Data Collection Workbooks (also known as a "**DCW**") and the Design Decision Matrix (also known as a "**DDM**"). Contractor shall provide County with DCWs and DDMs that have been pre-populated with Contractor's recommended configuration or design. • Work with the County Workgroup to begin the initial population of the DCWs. • Work individually with each member of the County Workgroup and County SMEs to populate several entries of the DCW, and then observe and assist each member of the County Workgroup in populating the DCW	resolutions. • Validation of completed WBT scripts by all participants. • Listing of tools, processes, and objectives for subtask 3.2 (Perform Data Collection (System Review Follow-Up)). • Validation of completed DCW and DDM data collection tools training. • Initial population of DCWs. • Documentation of initial design decisions in DDM. • Documentation of next steps. • Provide updated learning plan document. • Project Status Reports. • Updated Education Tracker documenting County personnel who have completed training and demonstrated competencies in the use of additional tools trained. • Identified gaps in County preparatory steps, and remedial actions necessary to keep progress on track. **Acceptance Criteria:** • County-Approved System Review Session agenda. • County-Approved System Review Session Event Summary Report. • Demonstration of Clinical Data Repository and Reporting covers all relevant County Domains, Venues, and Locations. • Event summary report includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • System Review Session Event Summary Report documents which County participants have achieved all educational objectives, including but not limited to preparing

Task 3 Conduct System Review	

independently.
• Work with the County Workgroup and County SMEs to begin documenting design decisions in the DDM – document several design decisions and then observe and assist as each member of the County Workgroup documents design decisions independently.
• Create System Review Session event summary report. The System Review Session Event Summary Report will include:
  ○ Online DCW and DDM status for specific solution;
  ○ Unresolved issues from the online DDM;
  ○ Section for Contractor and County counterpart to add additional follow-up items;
  ○ Tasks from the Project Work Plan for specific solution;
  ○ Assessment of County's ability to complete the remaining data collection and design decisions; and
  ○ Report on the status of education by County personnel.
• Incorporate County input and review the System Review Session Event Summary Report with County
• Provide recommendations for changes to the approach, staffing, and support model for the upcoming activities.
• Identify, document, and review next steps for data collection and completion of design documents with County .
Contractor will track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports.
	participants to, complete data collection activities as outlined in this SOW.
	• Approved assignments for Contactor and County to remediate any deficiencies identified in the System Review Session.

Subtask 3.2 Perform Data Collection (System Review Follow-Up) Following the system review session, Contractor Delivery Consultant will work with the County SOW Lead and the County Workgroup, and other relevant SOW Workgroup members, to complete the DDMs and DCWs that provide the data for	**Deliverable 3.2 System Review Data Collection** • Facilitated weekly calls and/or meetings • Complete DDM that has been validated by Contractor. • Complete DCWs that have been validated by Contractor.

Task 3 Conduct System Review	
the subsequent design and build process. Contractor will support the County SOW Lead and County Workgroup, who will work with County SMEs to complete the DDM and DCWs. Contractor will support the data collection process as follows: • Provide a Best Practice Clinical Data Repository and Reporting process with all of its components. • Identify data, information, and reports to ensure the County can meet Meaningful Use requirements. • Track progress and communicate status of DDM and DCW completion. • Facilitate on-site weekly meetings to discuss issues. • Regularly review a sampling of work in progress DDMs and DCWs to provide County with feedback and direction to improve the quality of data collected if needed. • Address questions and comments arising within the County Workgroup which stand in the way of making and documenting design decisions in the DDM • Facilitate relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Clinical Data Repository and Reporting. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Contractor Delivery Consultant will be	• Weekly progress reports on completion of DDMs and DCWs. • Regular notification of issues and risks related to quality and schedule of document completion. • Documented Risk and Issue Matrix which includes current and final status of all risks and issues and date of resolution. • Best Practice Clinical Data Repository and Reporting process with all of its components • Relevant cross-SOW reviews of DDMs and DCWs to assess the impact on the Clinical Data Repository and Reporting processes. • Update Risks and Issue Matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Additional design coaching sessions as needed to complete documents at necessary level of detail on schedule. • Contractor Delivery Consultant support through ad hoc calls and e-mails. • Detailed review and documented feedback on a sampling of DDMs and DCWs in order to assure that County is achieving level of completeness and comprehensiveness required for successful design, build, and implementation. • Documented decisions made related to DDM and DCWs. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).

Task 3 Conduct System Review	

available for ad hoc calls and support by e-mail. Immediate request for support will be routed to another Contractor designee if the Delivery Consultant is unavailable.
• Deliver additional design coaching sessions (on-site in Los Angeles or online) as need is identified by Contractor review or by County SOW Lead.
• Weekly calls and/or meetings of at least sixty (60) minutes will:
  ○ Discuss progress compared to timelines documented in the Project Work Plan; and
  ○ Identify issues with data collection (risks, quality, etc.) and escalate as appropriate.
• Update and maintain a Risk and Issue Matrix related to the completion of DDMs and DCWs and alert County of any risks to schedule.
	Acceptance Criteria:
	• Contractor's assistance in completing DDMs and DCWs is sufficient to result in on-schedule progress to task 4 (Conduct Design Review), including all initially defined items as well as agreed upon necessary additions identified during the system review process.
	• County-Approved DDMs and DCWs sufficiently complete to result in on-schedule progress to task 4 (Conduct Design Review).
	• Identified issues are resolved and or closed.

Task 4 Conduct Design Review
Task Description
The purpose of this task is to review, confirm the accuracy of, and finalize design decisions prior to system build. Contractor will provide and review recommended workflows with County, document County's design decisions, finalize the data collection tasks, and validate the EHR System design and build for completeness and accuracy.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Data Repository and Reporting Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Clinical Data Repository and Reporting Analyst
  ○ County Clinical Data Repository and Reporting SOW Lead; and
  ○ County Clinical Data Repository and Reporting SOW Workgroup.

Task 4 Conduct Design Review	
Subtask 4.1 Conduct Design Review Session The Design Review Session is a week-long event held in Kansas City or another mutually agreed upon location. Prior to the Design Review Session, Contractor will provide County with a detailed agenda, which shall include the expectations of attendees and anticipated post-event work expected to be completed by participants. During the Design Review Session, design decisions for each component of the Licensed Software will be reviewed and their completeness and acceptability confirmed. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. During the Design Review Session, Contractor will: • Demonstrate the workflow of the relevant solutions/Licensed Software modules. • Review data collection materials and/or data received in DCWs. • Review and confirm the completeness and acceptability of design decisions. • Review, discuss, and confirm integration decisions with respect to Licensed Software Modules, Third-Party Products, and other relevant systems. • Review and confirm County Approval on design decisions documented in MethodM Online. • Recommend an approach (and execute it) to address open issues and decisions that have not received Approval. • Identify and communicate current progress, as well as next steps based on agreed upon Project Work Plan. • Review the expected goals identified for the Design Review Session follow-up activities	**Deliverable 4.1** • List of participants and materials for Design Review Session (agenda, presentation materials, and all training materials). • Completed and Contractor-confirmed DCWs. • Completed and Contractor-confirmed design decisions including decisions about cross-Domain integration. • Updated versions of the DDM and DCWs based on design review feedback. • Design Review Session Event Summary Report and issues log. • Approved assignments and schedule for tasks to be completed in preparation for system validation task. • Identification of open issues needing resolution or escalation, as documented in the DDM, including assignment of responsible Party for the resolution. • Data flow and workflow diagram depicting interdependencies between Clinical Data Repository and Reporting workflows, and other clinical and administrative workflows (e.g., nursing documentation, finance), and workflows that are external to DHS (e.g., external payers). **Acceptance Criteria:** • Agenda, presentations, and objectives for System Review Session address and meet all objectives defined in the activities in subtask 4.1 (Conduct Design Review Session). • County-Approved Design Review Event Summary Report • Design Review Summary Event Report accurately describes the content of the discussions and decisions, expected outcomes, and next steps required for Project progression. • Design Review Event Summary Report

Task 4 Conduct Design Review	
established for County, and verify mutual understanding of who will carry out each aspect of the work. During the Design Review Session, Contractor will: • Conduct an all-day integrated welcome session for all Domain workgroups. • Facilitate meetings between the County Workgroup and the Contractor Solution Architect to review the DDM related to Clinical Data Repository and Reporting. • Provide an overview of the workflows and processes in the various solutions/Licensed Software Modules to ensure the County Workgroup's understanding. • Provide feedback to County on the completeness and acceptability of design decisions documented in the DDM for Clinical Data Repository and Reporting and other related SOWs to date by County and identify further work that is required by County. • Provide workflow and configuration impact as a result of a proposed decision. • Confirm County Approval of design decisions (using the online collection tool) and attend to issues as to decisions that have not received sign off. • Review additional data collection materials and/or data received in DCWs. • Provide an update on the state of the integration decisions across Domains and identify further data or decisions required from County. • Provide County with recommended Best Practices to facilitate design decisions (recommended design review). • Conduct system demonstration of Licensed Software standard build. • Discuss and document potential modifications to standard build.	includes a realistic assessment of County's ability to complete remaining data collection and design activities, as well as a written plan for ensuring on-time progress. • County verifies that revised versions of DDM and DCW accurately reflect feedback and design decisions. • County Approval on design decisions using the online collection tool. • County Approved identified next steps. • County review and Acceptance of documentation and data flow diagrams that address interdependencies among Modules/Domains, both internal and external, including integration with other disciplines (e.g. pharmacy operations, laboratory, radiology).

Task 4 Conduct Design Review	
• Identify need for additional data collection required to finalize design. • Provide training and overview of new DCWs for additional data collection. • Review relevant County policies and procedures and incorporate, as appropriate, in content and functional design, or recommend changes to policies and procedures to be considered by County. • Manage and maintain a documented record of the Clinical Data Repository and Reporting data conversion (historical data upload) requirements. At the end of the Design Review Session, Contractor will: • Draft the Design Review Session Event Summary Report. • Review the Design Review Session Event Summary Report with County personnel after the end of the session. • Identify and communicate current progress, as well as next steps, based on agreed upon Project Work Plan. • Identify and discuss next steps with County personnel. • Develop and communicate required County activities to complete design decisions and data collection.	
Subtasks/ Deliverables	
Subtask 4.2 Conduct Design Review Session Follow-Up Following the Design Review Session, the Contractor Delivery Consultant will continue to track progress on Deliverables and report progress as well as issues and risks in the Project Status Reports. Contractor will support the County SOW Lead and County Workgroup members who will work with County SMEs to complete the DDM and DCWs.	**Deliverable 4.2 System Design Data Collection** • Facilitated weekly calls and/or meetings. • Completed DDM validated by Contractor. • Completed DCWs validated by Contractor. • Regular notification of issues and risks related to quality and schedule of document completion. Documentation on risk matrix tool of current and/or final status of all issues and date of resolution. • Design coaching sessions provided on an as-

Task 4 Conduct Design Review	
Contractor will support the data collection process as follows: • Track progress of DDM and DCW completion. • Facilitate weekly on-site meetings to discuss issues. • Conduct a detailed review of work-in-progress DDMs and DCWs to provide County with written feedback and direction to improve quality of data collected and level of analysis completed. • Review relevant cross-SOW implications for Clinical Data Repository and Reporting. • Track design recommendations accepted/rejected by County in MethodM Online. • Facilitate decision making process related to the completion of the DDM. • Identify systemic issues related to completion of DDMs and DCWs (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). • Provide additional Contractor resources to address issues and recommendations above. • Contractor Delivery Consultant will provide ad hoc support by telephone and e-mail. • Deliver additional design coaching sessions (on-site or online) as need is identified by Contractor review or by County SOW Lead. • Conduct weekly calls during which Contractor will discuss progress compared to the Project Work Plan. • Identify issues with data collection (risks, quality, etc.). • Update and maintain a risk matrix related to the completion of DDMs and DCWs and alert County of any risks including, but not limited to, risks to schedule.	needed basis to complete documents at necessary level of detail on schedule. • Weekly progress reports on completion of DDMs and DCWs. • Contractor Delivery Consultant available for ad hoc calls and e-mails. • Feedback and recommendations based on detailed sample reviews of DDMs and DCWs. • Documented decisions made related to DDM and DCWs. • Documented cross-SOW implications for Clinical Data Repository and Reporting. • Documented systemic issues related to completion of DDM and DCWs and recommendations to County to resolve (e.g., through additional training, augmenting resources). • Additional resources to address the issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)). • Updated risk matrix related to the completion of DDM and DCWs with alerts to County of any risks to schedule. • Notification of issues and risks related to quality and schedule of document completion. **Acceptance Criteria:** • County Approved completed DDMs and DCWs. • County verification that DDMs and DCWs are completed at a level of detail required for forward progression of Project, including all initially defined items, as well as agreed upon necessary additions identified during the design review process. • Identified issues are resolved and/or closed

Task 4 Conduct Design Review	
	and in-process issues have current updates.

Subtask 4.3 Conduct Workflow Localization
The Workflow Localization Session(s) will be held at County site(s) where Licensed Software will be implemented and will assist County personnel to better understand the future state design, any changes in role/job responsibilities, benefits, educational and training needs, and downtime strategy.
Contractor will:
• Draft an agenda for meetings that will be held at County facilities and departments for review by the County.
• Conduct a series of meetings across all relevant County facilities and departments where EHR System will be utilized to develop the workflow localization Deliverables.
• Conduct crosswalk between Clinical Data Repository and Reporting workflow localization Deliverables and OWAs from other clinical disciplines, and highlight interdependencies, issues, and risks.
• Work with County personnel to identify necessary and recommended changes to policy, procedures, and bylaws required to implement future workflows.
• Develop the following Deliverables:
  ○ Future State Workflow Diagrams covering the complete range of Clinical Data Repository and Reporting processes impacted by the Licensed Software and with attention to interrelationships with other modules and other relevant systems;
  ○ A list and examples of policies and procedures that will need to be created or revised;
  ○ Processes for maintaining and updating Clinical Data Repository and Reporting;
  ○ Listing of suggested clinical pathways and decision support algorithms;
	Deliverable 4.3 Workflow Localization Documents
	• List of participants and materials for Workflow Localization Sessions (agenda, presentation, and all training materials).
	• Future State Workflow Diagrams covering the complete range of Clinical Data Repository and Reporting processes impacted by the Licensed Software.
	• A list and examples of policies and procedures that will need to be created or revised.
	• Listing of suggested decision support algorithms.
	• Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices.
	• Description of how County personnel roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions for all modified or new positions identified.
	• A list of documented, measurable target procedures which will demonstrate improvement of new system over baseline function, including baseline metrics, procedures for how to collect baseline data, track measures, and compare before and after performance.
	• Recommendations for Clinical Data Repository and Reporting downtime strategies and documentation, including samples based on County build of Licensed Software.
	• Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented.

Task 4 Conduct Design Review	
○ Recommendations, impact statement, and a roadmap for implementation of organizational changes to achieve identified benefits and utilize Contractor Best Practices; ○ Description of how County personnel's roles will change and document new positions and revisions to existing job descriptions, including sample job descriptions; ○ Documented, measurable target baseline metrics and procedures for how to achieve baselines, target measures, and how to track measures; ○ Recommendations for Clinical Data Repository and Reporting downtime and recovery strategies, including samples; and ○ Stop, Start, Continue recommendations as to what processes will stop, what processes will continue, and what new processes will be implemented. Contractor will provide County with draft Deliverables and will facilitate review sessions in which each Deliverable is reviewed with the County Workgroup and revised by Contractor. Contractor will work with County to identify the actions and types of resources required to address all of the findings and recommendations of the workflow localization analysis including such items as the development of policies and job descriptions, etc. Contractor will incorporate feedback, modify the Deliverables, and submit to County for Approval. In instances where there is no consolidated County feedback or agreement on how feedback should be included in the Deliverable, Contractor will log the issues and refer through the defined governance process for resolution. Contractor will document and incorporate all County feedback and decisions and finalize the workflow localization Deliverables.	**Acceptance Criteria:** • County Approved Workflow Localization Documents. • Workflow Localization Documents are complete and accurately reflect County feedback and decisions made during the design review process. • Workflow Localization Documents address all components of Subtask 4.3 (Conduct Workflow Localization) in sufficient detail and completeness to assure that: ○ All County patient care activities and services are addressed; and ○ Realistic strategies for achieving Best Practice standards are delineated. • Concrete benefit realization targets, with schedule of metrics to be achieved for each Domain, Venue, and Location. • Suggested changes are achievable within County's resource constraints.

Task 4 Conduct Design Review	
Subtask 4.4 Conduct Clinical Data Repository and Reporting Workflow Workshop Contractor will conduct Clinical Data Repository and Reporting Workflow Workshops as needed in which the future state workflows for Clinical Data Repository and Reporting will be demonstrated to County and decisions required for the design of Clinical Data Repository and Reporting functionality will be made. During the workshops, Contractor will: • Describe Best Practices future state clinical workflow for Clinical Data Repository and Reporting. • Discuss the key decision points related to automation of capture and management of Clinical Data Repository and Reporting. • Document the key design decisions and desired outcomes related to Clinical Data Repository and Reporting in the DDMs. • Document implication of key design decisions related to integration with existing third-party and County systems and Clinical Data Repository and Reporting in the DDMs. • Compare and contrast design elements for Clinical Data Repository and Reporting and document outcomes in the DDMs. • Confirm County Approval of the design elements and design decisions. • Expeditiously escalate issues for which there is no Approval to the predefined governance process. • Identify, discuss, and communicate next steps as identified in the Project Work Plan with County personnel. • Identify and assign any design decisions or data collection activities that are outstanding. • Refine and augment downtime strategy for Clinical Data Repository and Reporting Domain.	**Deliverable 4.4 Clinical Data Repository and Reporting Workflow Workshop** • Agenda/Schedule for Clinical Data Repository and Reporting Workflow Workshops. • Attendance sheet/roster of participants for Clinical Data Repository and Reporting Workflow Workshop (agenda and presentation). • List of materials for Clinical Data Repository and Reporting Workshop (agenda and presentation). • Updated Issues Log. • Completed and County confirmed DCWs. • Completed and confirmed DDM. • Updated DDM and DCWs based on design review feedback. • Clinical Data Repository and Reporting Workflow Workshop Event Summary Report and Issues Log. • Updated downtime strategies for Clinical Data Repository and Reporting. **Acceptance Criteria:** • County-Approved Clinical Data Repository and Reporting Workflow Workshop Event Summary Report that provides an accurate summary of the workshop training delivered, the expected outcomes, and mutually agreed upon next steps. • County Approval of the design elements and design decisions.

Task 4 Conduct Design Review	
• At the end of the Clinical Data Repository and Reporting Workflow Workshop, Contractor will draft and finalize the Clinical Data Repository and Reporting Workflow Workshop Event Summary Report.	
Subtask 4.5 Develop Final Detailed Design Document Contractor will develop a final Detailed Design Document that includes the County design specifications for the Clinical Data Repository and Reporting Licensed Software build based on the data collected and decisions made during the design review and workflow localization. The Clinical Data Repository and Reporting final Detailed Design Document shall include documentation on all design decisions, including: • County Approval of the data collection and decision documents; • Whether the decision followed Contractor's recommendation or not; and • Justification for not following a Contractor recommendation. Contractor will submit a draft final Detailed Design Document for County review and facilitate a review session with the County Workgroup. Contractor will solicit County input and incorporate into the draft final Detailed Design Document, then submit the final Detailed Design Document for County Approval.	**Deliverable 4.5 Final Detailed Design Document** • Overview EHR System conceptual and logical design document. • Final DCWs. • Final DDM. • Final Future-State Workflows Diagrams. **Acceptance Criteria** • Content and functional coverage of system build is included in final Detailed Design Document. • Decisions made during task 4 (Conduct Design Review) incorporated in final Detailed Design Document.

Task 5 Complete Initial Partial System Build
Task Description
Contractor will deliver an Initial Partial System Build that will be used for system validation. This partial build will consist of a subset of the content and functional coverage of the final build.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Data Repository and Reporting Delivery Consultant;

Task 5 Complete Initial Partial System Build	
○ Contractor Clinical Strategist; ○ Contractor Solution Architect; and ○ Contractor Integration Architect. • County Key Employees ○ County Clinical Data Repository and Reporting SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Clinical Data Repository and Reporting Analyst; and ○ County Clinical Data Repository and Reporting SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 5.1 Identify Content and Functional Coverage of Initial Partial System Build (Using the DDM and DCW Tools and Other Documentation as Necessary) Contractor will provide County with a recommended list of content and functional coverage to be included in the Initial Partial system Build which it considers to be representative of County's environment and to include different care providers, different care venues, and disciplines, and Clinical Data Repository and Reporting processes. Contractor will facilitate a review session with County in which it: • Presents a rationale for how it came up with the recommended content for the Initial Partial System Build; • Presents the recommended content for the Initial Partial System Build; and • Obtains feedback from County. Based on feedback provided in the review session, Contractor will document the content and functional coverage in MethodM Online to be included in the Initial Partial System Build.	**Deliverable 5.1 Initial Partial System Build Specification (Using the DDM and DCW Tools and Other Documentation as Necessary)** • List of recommended content and functional coverage of Initial Partial System Build. • Facilitated review session of content and functional coverage of Initial Partial System Build. • Initial Partial System Build content and functional coverage specifications. **Acceptance Criteria:** • County Approved list of content and functional coverage of Initial Partial System Build. • Initial Partial System Build Specifications reflect accurately the design decisions recorded in the DDMs and DCWs.
Subtask 5.2 Complete Initial Partial System Build Contractor will develop the Initial Partial System Build for Clinical Data Repository and Reporting. Contractor will report progress on a weekly basis to County and proactively alert County of any issues and risks that may lead to a deviation from the Project Schedule.	**Deliverable 5.2 Initial Partial System Build** • Initial Partial System Build which conforms to the functions and content specified in the Initial Partial System Build Specifications. **Acceptance Criteria:** • County Approval of Initial Partial System Build which conforms to documented DDM and

Task 5 Complete Initial Partial System Build	
	DCW and other documents as required.

Task 6 Conduct System Validation	
Task Description	
Contractor will develop, deliver, review, and build upon the functionality delivered in the Initial Partial System Build and provide training relevant to testing. The Initial Partial System Build, as developed, will produce an integrated solution that meets the needs of County Clinical Data Repository and Reporting and prepare the County for testing of the design build. Contractor and County will begin the development of unit and system test scripts and test data for the Clinical Data Repository and Reporting Licensed Software.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Clinical Data Repository and Reporting Delivery Consultant;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect; and
  ○ Contractor Integration Architect.
• County Key Employees
  ○ County Clinical Data Repository and Reporting SOW Lead;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Clinical Data Repository and Reporting Analyst;
  ○ County Clinical Data Repository and Reporting SOW Workgroup; and
  ○ County Clinical Data Repository and Reporting SMEs who represent the end-users from each Domain and who will conduct system testing. These SMEs should have a solid understanding of the workflow in their area of expertise.	

Subtasks/ Deliverables	
Subtask 6.1 System Validation Session Contractor will conduct a week-long System Validation Session in Kansas City or Los Angeles as determined by County and Contractor. Contractor's AMS resources will participate in this event in person if the event is held in Kansas City, or remotely if the event is held in Los Angeles, to provide expertise that could positively impact post Go-Live Support Services. The objectives of the session are to: • Provide an in-depth demonstration of the solution and build to date using County's Domain.	**Deliverable 6.1 System Validation** • System Validation Session (agenda and presentation). • Library of sample Unit and System Test scripts to be adapted for County. • System Validation Session Event Summary Report for Clinical Data Repository and Reporting Licensed Software including Issues Log. • Updated DCWs in MethodM Online. • Build Audit Report (comparison between DCW and built Domain).

Task 6 Conduct System Validation	
• Provide hands on training on the Licensed Software in the Initial Partial System Build to the County Workgroup members and County SMEs who will conduct testing. • Begin development of County-specific unit and system test scripts. • Develop a list and schedule of work assignments and discuss next steps identified in the Project Work Plan with County Workgroup. • Validate database build to date of System Validation Session. • Validate proposed Clinical Data Repository and Reporting processes. During the one (1) week System Validation Session Contractor will: • Demonstrate the Initial Partial System Build to the County Workgroup and County's SMEs. • Facilitate the County Workgroup walk-through of the Initial Partial System Build. • Make available to County training material that County can customize according to County's build Specifications (vs. generic self-learning module). • Conduct training sessions on the Clinical Data Repository and Reporting Licensed Software to County IT personnel to allow unit and system testing to commence. • Conduct training on overall testing approach and specifically on Unit and System Testing. • Confirm and document the appropriate tests which need to be conducted on the Licensed Software with County. • Identify and document roles and responsibilities of Contractor resources, County Workgroup members, and County SMEs who will play a role in system validation testing. • Create a test plan for Unit and System	• Updated DDM in MethodM Online. • Updated Project documents. **Acceptance Criteria:** • County verification that System Validation Session Event Summary Report includes accurate documentation of the training content and mutually agreed upon next steps for forward progression of Project. • County verification that Contractor has provided evidence of County personnel achievement of learning objectives and readiness to perform testing activities. • Approval of unit test procedures, including all steps in the process. • Acceptance of the tools and techniques for performing the unit test and documenting defects and issues. • Approval of the test scenarios to be developed for the complete unit test, and the expected minimum acceptance criteria. • County Approval of "readiness" to proceed with Unit and System Testing of the Initial Partial System Build.

Task 6 Conduct System Validation	
Testing with input and participation from County. • Configure the Initial Partial System Build to incorporate feedback and any County-Approved modifications recorded in DDMs and DCWs. • Provide samples of Clinical Data Repository and Reporting Unit and System Test scripts (including test script for reviewing historical data). • Work with County to identify and document relevant test scenarios. • Work with County to identify and document relevant test patient data and regression test data. • Document test scripts and test patient data requirements. • Begin development of unit and system test scripts and test data, including the assumed data for the starting point of the unit test scripts. • Identify activities required by the County Workgroup for testing and validation of Clinical Data Repository and Reporting Licensed Software functionality and ensure that these activities have been assigned to the relevant County Workgroup members. • Identify and discuss next steps as documented in the Project Work Plan with County personnel. • Review conceptual and logical system design with the County Workgroup and incorporate design review and system validation feedback into design documents.	
Subtask 6.2 Conduct System Validation Session Follow-up Following the System Validation Session, Contractor will support County with the completion of Unit and System Test scripts and development of test data. Contractor will:	**Deliverable 6.2 Test Scripts and Test Data for Unit and System Testing** • Complete Unit and System Test scripts. • Test data loaded into test environment database. • Documented risks to schedule or to quality

Task 6 Conduct System Validation	
• Support County in developing detailed test scripts built upon the samples provided during the System Validation Session. • Review County-adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective. • Support County with the development of test data and specify volume of data required to perform thorough testing. • Monitor progress on test script and test data development. • Notify County of any risks to schedule or to quality and completeness of the scripts and data being developed. • Validate completeness of test data • Provide support by responding to all County ad hoc calls and e-mails in a timely manner to address questions as they arise. • Deliver additional training on test script and test data development to County personnel as needed. • Develop defect severity definitions to support decision making regarding readiness for Go-Live. • Document status of testing activities and report progress as well as issues and risks in the Project Status Reports.	and completeness of the scripts and data being developed. • Documented test procedures. • Documented County readiness for testing, including County Workgroup and County SME readiness (training complete). • Defect severity definitions developed to distinguish: (a) acceptability for Integration Testing; (b) necessity for Go-Live; and (c) acceptability for remediation after Go-Live. **Acceptance Criteria:** • All identified test scripts completed by the County Workgroup and County SMEs without issue. • County verifies that test data required to complete all test scripts has been identified and developed.

Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct System and Unit Testing
Task Description
Contractor will document and complete the system build to meet the final Detailed Design Document specifications in the DDMs and DCWs. Contractor will release system content and functionality on an ongoing basis for review and testing by County. Once the full build has been completed and System and Unit Testing are complete, Integration Testing can begin.
Personnel Requirements
• Contractor Key Employees   ○ Contractor Project Director;

Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct System and Unit Testing	
○ Contractor Project Manager; ○ Contractor Clinical Data Repository and Reporting Delivery Consultant; ○ Contractor Clinical Strategist; ○ Contractor Solution Architect; ○ Contractor Integration Architect; and ○ Contractor Test Lead. • County Key Employees ○ County Clinical Data Repository and Reporting SOW Lead; ○ County Project Director; ○ County Project Manager; ○ County Clinical Data Repository and Reporting Analyst; and ○ County Clinical Data Repository and Reporting SOW Workgroup.	
Subtasks/ Deliverables	
Subtask 7.1 Complete System Build Contractor will iteratively build Clinical Data Repository and Reporting Licensed Software functionality and content until the full build of Clinical Data Repository and Reporting content and functionality is complete. Specific Contractor activities include: • Develop a Release Schedule. • Regularly release new functionality in a structured and scheduled manner to the County Unit and System test environment. • Contractor will optimize the design and build of the Licensed Software and Third Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release. • Define test scripts to validate interfaces with third-party vendor systems, services, and devices. • Support County in developing detailed test scripts to validate release of new functionality which addresses County-Approved Omissions. • Provide test scripts to validate release of new	**Deliverable 7.1 Complete System Build for Clinical Data Repository and Reporting** • Release Schedule. • Iterative releases of Clinical Data Repository and Reporting Licensed Software content and functionality for Unit and System Testing. • Release notes identifying the content of each new release and any issues and defects applicable to County that have been corrected by the release. • Complete Build of Clinical Data Repository and Reporting Licensed Software for final unit and system testing that includes all content and functionality as documented in the final Detailed Design Document. • Weekly updates on status of release and defect fixes as part of the Project Status Report. • Test scripts validating interfaces with third-party vendor systems, services, and devices. **Acceptance Criteria** • County validation that releases of Clinical Data Repository and Reporting builds meet specifications as documented in the final Detailed Design Document.

Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct System and Unit Testing	
functionality which addresses County-Approved Omissions. • Report weekly on progress toward Complete Build, and alert County of any issues or risks. • Notify County when the Clinical Data Repository and Reporting Licensed Software has been fully configured to include all DDMs and DCWs related to Clinical Data Repository and Reporting.	
Subtask 7.2 Resolve Defects and Implement County-Approved Change Requests As new functionality is released, the County Workgroup will test the system using test scripts developed during system validation and identify defects and omissions in the planned build that should have been included and would not require an enhancement to the Licensed Software ("**Omissions**"). Contractor will: • Provide ad hoc telephone, e-mail, and in-person support to the County testing teams. • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for additional resources, test support, and management tools, etc. • Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions. • Enter those defects and Omissions of content or functionality which are not entered directly by County personnel but which are, instead, communicated by e-mail to the Contractor Test Lead for entering into MethodM Online. • Correct defects and update the Release Schedule to notify County of the build in which defect resolutions will be released. • Address identified Omissions as follows:	**Deliverable 7.2 Resolved Defects and Implement Approved-Change Requests** • Updated Release Schedules. • Specifications for requested additions of content and functionality. • Defect resolution document describing identified defects and Omissions which have been resolved. • Documented resolution on Omissions that are escalated to the governance process, and how they have been resolved. • Implementation of defect resolutions and County-Approved change requests. • Gateway criteria for Unit and System Test completion. **Acceptance Criteria:** • County validation that defect resolution fully addresses defect as logged and meets targeted timeframes specified in the Issues Log. • County validation that Approved changes to address Omissions fully address the documented omission specifications. • County Approved gateway criteria for unit and system test completion.

Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct System and Unit Testing	
○ Document and verify the requirements to address the Omission in a consistent and structured format; ○ Address all Omissions which will have little or no impact on the Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released; ○ Escalate all Omissions which will have impact on the Project Schedule or risk for consideration by the governance process; ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go Live, or should be rejected; and ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released. ● Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing. ● Document County-Approved gateway criteria.	
Subtask 7.3 Complete Unit and System Testing Contractor will notify County once the Clinical Data Repository and Reporting build as documented in the DCWs and DDMs is complete. Contractor will: ● Provide updates on the status of defect resolution and implementation of County-Approved change request on weekly calls. ● Release defect resolutions and implemented change requests as part of the build release cycles. ● Support County in re-testing resolved defects deployed by Contractor.	**Deliverable 7.3 Testing of Complete System Build Finalized Ready for Integration Testing** ● Documented results of completed and tested Clinical Data Repository and Reporting Licensed Software. ● List of resolved defects, including date of completion, retest results, and County Approval. ● County-Approved completed Unit and System Testing for Clinical Data Repository and Reporting Licensed Software.

Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct System and Unit Testing	
• Jointly decide with County through the governance process when the Clinical Data Repository and Reporting build is ready for moving to Integration Testing, based on: ○ Completeness of functionality and content; ○ Severity of outstanding defects; and ○ Severity of outstanding change requests.	**Acceptance Criteria:** • Resolution of all outstanding defects defined as required for Clinical Data Repository and Reporting Licensed Software Acceptance. • Licensed Software Build Completion Document provided by Contractor and Approved by County. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

5.3 Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.18 (Data Conversion Statement of Work)

to the

Electronic Health Records System and Services Agreement

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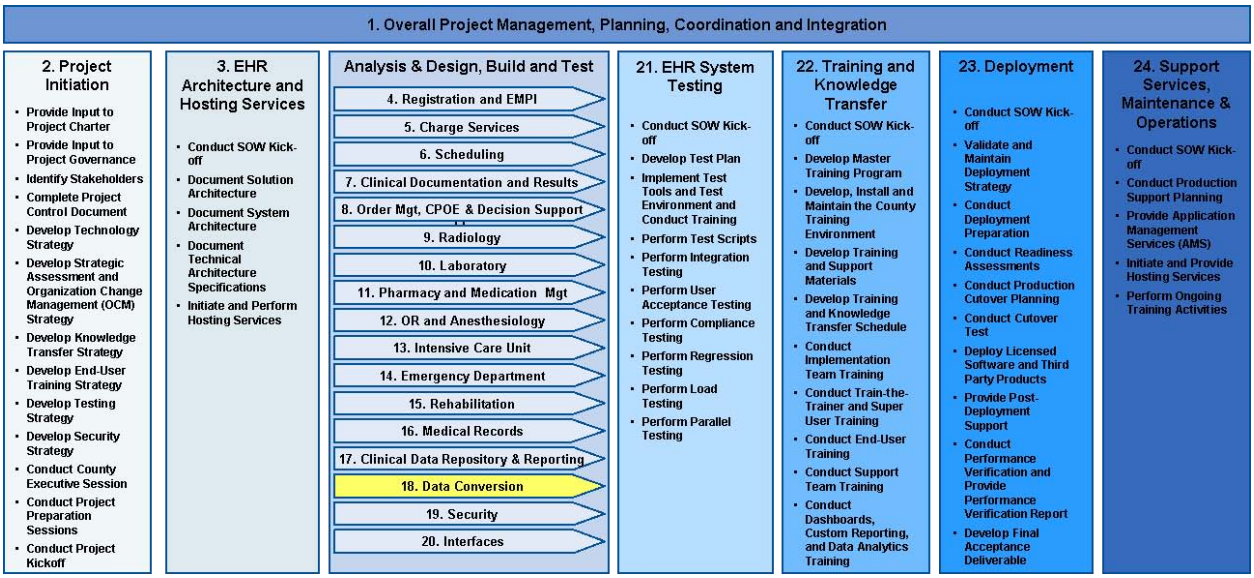
1. Introduction

This Exhibit A.18 (Data Conversion Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System, as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.18 (Data Conversion Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.18 (Data Conversion Statement of Work) (also known by Contractor as Historical Data Upload). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW describes Services to be provided by Contractor, and where specifically identified by County, to manage and execute all the data conversion activities for the Project.

3. SOW Summary

3.1 Overview

This SOW describes Services to be provided by Contractor to manage and execute all the data conversion activities for the Project. This SOW will result in the documentation and validation of data sources, and the development of a data conversion strategy and specifications. Contractor will test and perform data conversion for the Project.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology (also referred to in this Exhibit as "**MethodM**"), as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/ processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the forgoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provides the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for this Exhibit A.18 (Data Conversion Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.18 (Data Conversion Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The detailed durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of Deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Data Conversion SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project Status Meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/ Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Detailed Data Conversion-	Deliverable 1.1 Data Conversion-Specific Section of

Task/ Subtask Name	Deliverables
Specific Section of the Project Work Plan	the Project Work Plan
Subtask 1.2 Conduct Initiation Session for Data Conversion Workgroup	Deliverable 1.2 Data Conversion Initiation Session (Key Deliverable)
Task 2 Develop and Document Data Conversion Strategy	
Subtask 2.1 Confirm and Validate Data Sources	Deliverable 2.1 Data Sources
Subtask 2.2 Develop Data Conversion Implementation Strategy Document	Deliverable 2.2 Data Conversion Implementation Strategy Document
Task 3 Develop Data Conversion Specifications	
Subtask 3.1 Identify Data Conversion Specifications	Deliverable 3.1 Data Conversion Specifications (Key Deliverable)
Task 4 Conduct Data Conversion Pilot	
Subtask 4.1 Execute Data Conversion Pilot	Deliverable 4.1 Data Conversion Pilot (Key Deliverable)
Task 5 Conduct Data Conversion	
Subtask 5.1 Perform Data Conversion	Deliverable 5.1 Data Conversion Executed in Staging Environment

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable will be developed in accordance with the following Contractor's obligations, which will be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document ("**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas and coordinate scheduling for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and analyze County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee will notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor will make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable will be provided to County with a request for Acceptance. County will notify Contractor of it Acceptance or rejection in a time that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Data conversion-specific training on the Licensed Software and Third-Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Data Conversion Workgroup**" or "**County Workgroup**") and the County Data Conversion Workgroup will be introduced to various Contractor tools, existing Interface libraries, methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Delivery Consultants; and
  ○ Interface Architect.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Data Conversion SOW Lead; and
  ○ County Data Conversion Workgroup.

Task 1 Conduct SOW Kick-off	
Subtasks/ Deliverables	
Subtask 1.1 Develop Detailed Data Conversion-Specific Section of the Project Work Plan As part of the Project Control Document, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a data conversion-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) from Contractor, County, and third-party vendors required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.18 (Data Conversion Statement of Work) and subject to County Approval.	**Deliverable 1.1 Data Conversion-Specific Section of the Project Work Plan** • Data conversion-specific section of Project Work Plan; and • Sub-Project Work Plan for data conversion. **Acceptance Criteria:** • The data conversion-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The data conversion-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Detailed Data Conversion-Specific Section of the Project Work Plan) and includes requirements for involvement of third-party vendors. • The data conversion-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the data conversion-specific section of the Project Work Plan are realistically achievable with reasonable effort as determined by County (subject to adjustment after completion of Subtask 4.1 (Execute Data Conversion Pilot) of this SOW). • Elements of the data conversion-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Confirmed availability of Contractor resources required to implement the data conversion Project Work Plan.
Subtask 1.2 Initiation Session for Data Conversion Workgroup Contractor will conduct an initiation session to provide an introduction to the County Workgroup to the Services covered by this SOW, including the time lines and nature of the work effort that will be required to implement this	**Deliverable 1.2 Data Conversion Initiation Session** • Data Conversion Initiation Session materials for County review. • Initial list of systems and data sources for which data conversion capabilities may be

Task 1 Conduct SOW Kick-off	

SOW.
Before the Data Conversion Initiation Session, Contractor will:
• Work with County to identify all Contractor, County, and third-party vendor resources required to complete the tasks outlined in this SOW;
• Provide County with a roster of kick-off participants;
• Conduct a project management workshop as described in task 12 (Conduct Project Preparation Sessions) of Exhibit A.2 (Project Initiation Statement of Work); and
• Develop an agenda/schedule for the Data Conversion Initiation Session.
Contractor will conduct the Data Conversion Initiation Session as follows:
• Review and document systems and data sources for which data conversion capabilities may be required by County;
• Illustrate and document dependencies between the this SOW and any other SOWs and Project work streams; including at a minimum:
  ○ Requirements gathering and functional/technical specifications;
  ○ Testing, including Integration Testing and User Acceptance Testing;
  ○ Development approach;
  ○ Go-Live readiness assessment; and
  ○ Post-Go-Live assessment.
• Review tasks, Deliverables, and Milestones for the data conversion;
• Train the County Data Conversion Workgroup on the required methodology used to support Contractor in developing the data conversion specifications, and related activities; and
• Provide the County Data Conversion Workgroup with an overview of MethodM including system and design review activities and data collection processes.
	required by County for review during Data Conversion Initiation Session.
	• Report documenting Exhibit A.2 (Data Conversion Statement of Work) dependencies.
	• List of assignments and roles associated with those assignments for Contractor, members of the County Data Conversion Workgroup, and/or third-party vendors.
	• Data Conversion Initiation Session Event Summary Report.
	• Data Conversion Interface Initiation Session presentation materials.
	
	Acceptance Criteria:
	• The Data Conversion Initiation Session Event Summary Report from Contractor documenting that the Data Conversion Initiation Session (a) has been completed and (b) includes accurate Documentation of the content, outcomes and next steps agreed upon at the Data Conversion Initiation Session Event.
	• The Data Conversion Initiation Session Event Summary Report has been Approved by County.
	• Report documenting Exhibit A.2 (Data Conversion Statement of Work) dependencies addresses all elements described in subtask 1.2 (Conduct Initiation Session for Data Conversion Workgroup).
	• Report documenting Exhibit A.2 (Data Conversion Statement of Work) dependencies has been Approved by County.
	• Agreed upon and understood learning objectives for County personnel.
	• Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

Task 1 Conduct SOW Kick-off	
After the Data Conversion Initiation Session, Contractor will prepare a Data Conversion Initiation Session Event Summary Report for review and Approval by County.	

Task 2 Develop and Document Data Conversion Strategy	
Task Description	
During this task, Contractor will develop for County's Approval a Data Conversion Strategy, including identification of source systems, approach to conversion, validation and data cleansing, roles and responsibilities for Contractor Personnel and County staff, and policies and procedures to ensure controls are in place in accordance with County rules and regulations.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Integration Architect;
  ○ Interface Architect;
  ○ Lab Solution Architect;
  ○ Radiology Solution Architect; and
  ○ Registration Solution Architect
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface SOW Lead;
  ○ County Data Conversion SOW Lead;
  ○ County Lab Lead;
  ○ County Registration Lead;
  ○ County Radiology Lead;
  ○ County Data Architect; and
• Third-Party System Vendor Interface Lead.	

Subtasks/Deliverables	
Subtask 2.1 Confirm and Validate Data Sources Contractor will document and validate the systems for which data conversion will be performed, including systems identified by County or identified in current state assessments performed during other SOW work streams. Contractor will review the data sources and elements identified. Contractor and County will jointly conduct an assessment of the data quality. Contractor will draft a Data Quality Assessment	**Deliverable 2.1 Data Sources** • Data sources for data conversion. • Risk Analysis Document. • Data Quality Assessment. **Acceptance Criteria:** • Documented and County Approved data sources.

Task 2 Develop and Document Data Conversion Strategy	
with County input and participation that identifies at the minimum: • Data integrity issues; • Data cleansing effort required; and • Recommendations for the extent of inclusion of data source/data element in the conversion. Contractor will develop a Risk Analysis Document that, for each data source to be converted, will (a) identify and document issues, risks and barriers that may interfere with the data conversion work stream and (b) propose recommendations and options for mitigating the identified risks, including identifying: • Data which Contractor cannot convert or has not been able to convert in the past; • Any systems for which Contractor has experienced problems converting data in the past; • Data sources where the "catch-up" or cutover process involves significant complexity, labor or risk; • Potential issues connecting/reconciling MPIs across data sources; and • Historical data or data sources for which the cost and/or effort of the data conversion likely outweighs its benefit. Contractor will conduct a review session of the Data Quality Assessment and recommendations with County. Contractor will incorporate County feedback and proposed changes into the Data Quality Assessment and submit a final version to County for Approval.	• The Risk Analysis Document addresses all elements described in subtask 2.1 (Confirm and Validate Data Sources). • The Risk Analysis Document demonstrates substantial detail and breadth of scope as determined by County, and incorporates, and is consistent with, County-provided input. • The Risk Analysis Document has been Approved by County. • The Data Quality Assessment addresses all elements described in subtask 2.1 (Confirm and Validate Data Sources). • The Data Quality Assessment incorporates, and is consistent with, County-provided input. • The Data Quality Assessment has been Approved by County.
Subtask 2.2 – Develop Data Conversion Implementation Strategy Document Contractor will prepare a Data Conversion Implementation Strategy Document, which will include: • Purpose and expected benefits of data conversion;	**Deliverable 2.2 Data Conversion Implementation Strategy Document** • Data Conversion Implementation Strategy Document. • Updated detailed sub Project Work Plan(s) for data conversion that specifies when the data conversion will be initiated and completed.

Task 2 Develop and Document Data Conversion Strategy	
• Source systems; • Approach for determining the conversion period (i.e., regulatory/legal/reporting requirements, trade-offs between amount of data vs. accuracy/necessity of data, clinical requirements, data retention requirements); • Data conversion methodology; • Data integrity analysis and cleansing methodology; • Data validation methodology to be determined mutually with County; • Projected time and resource requirements to complete the data conversion; • The cost-benefit analysis of the data conversion (compared with proceeding without converting the data); • Approach for ensuring data integrity and data privacy to be determined mutually with County; • Roles and responsibilities of Contractor, County, and third-party resources; • Timing, sequencing and coordination of the data conversion process (including cutover, catch-up and deployment) that is tied to (a) the timing of related/applicable SOWs and work streams and (b) the phased deployment strategy for the Project; • Recommendations for decommissioning, retiring, or freezing legacy systems; • Alternatives for accessing legacy data not converted from source system (e.g., retain legacy system, archive data); • Approach for development of reports that span the cutover date (e.g., how to develop a quarterly report based on data partially in legacy system and partially in Licensed Software); • Data conversion contingency plan to be created mutually with County input and participation, including risk mitigation of failed conversion to ensure there is no	**Acceptance Criteria:** • The Data Conversion Implementation Strategy Document incorporates, and is consistent with, County-provided input. • The Data Conversion Implementation Strategy Document addresses all elements described in subtask 2.2 (Develop Data Conversion Implementation Strategy Document). • The Data Conversion Implementation Strategy Document reflects County's decisions regarding whether to perform the data conversion on each data source, and if so, how much data will be converted. • The Data Conversion Implementation Strategy Document has been Approved by County. • The updated sub-Project Work Plan for data conversion incorporates, and is consistent with, the information set forth in the Approved Data Conversion Implementation Strategy Document, and has been Approved by County.

Task 2 Develop and Document Data Conversion Strategy	

interruption to patient care;
• Data quality assurance criteria, including:
  ○ Checkpoints for data validation; and
  ○ Gateway criteria for testing.
• Associated dependencies with all other applicable SOWs.
Contractor will review the draft Data Conversion Implementation Strategy Document with County.
For each data source identified in the draft Data Conversion Implementation Strategy Document, County will determine whether to proceed with the data conversion process, and if so, how much data to convert.
Contractor will update the Data Conversion Implementation Strategy Document to reflect County's decisions with respect to each data source.
Contractor will incorporate County feedback and proposed changes into the Data Conversion Implementation Strategy Document and submit a final version to County for Approval.
Contractor will update the sub-Project Work Plan for data conversion with the information developed in the Data Conversion Implementation Strategy Document.	

Task 3 Develop Data Conversion Specifications
Task Description
Contractor will work with the County to define the specifications for migration of data from the County legacy system(s) into the Contractor's Licensed Software, including alternatives for accessing data that will not be converted but that is necessary to meet patient safety or regulatory requirements.

Task 3 Develop Data Conversion Specifications	
Personnel Requirements	

• Contractor Key Resources
  ○ Interface Architect; and
  ○ System Engineer.
• County Key Resources
  ○ County Data Conversion SOW Lead;
  ○ County Interface SOW Lead; and
• Third-Party System Vendor Interface Lead.	

Subtasks/Deliverables	

Subtask 3.1 – Identify Data Conversion Specifications
Contractor and County will develop a Data Conversion Specifications for each data source, including:
• Description of the data source including:
  ○ data elements;
  ○ data formats and standards;
  ○ data volume provided by County;
  ○ vendor contact information provided by County;
  ○ data dictionaries;
  ○ transfer methods (flat file, etc.); and
  ○ future disposition of the system (whether system will be retired or maintained), to be determined by County.
• Mapping of data elements to the Licensed Software Module;
• Requirements for data retention (e.g., business need, regulatory requirement) determined by County;
• Amount of data (i.e., how far in the past should data be converted - e.g., one (1) month prior to deployment, one (1) year prior to deployment), to be determined by County;
• Type of conversion:
  ○ Automated;
  ○ Semi-automated; and
	Deliverable 3.1 Data Conversion Specifications
	• Data Conversion Specifications
	• Risk Analysis Document.
	Acceptance Criteria:
	• The Data Conversion Specifications for each data source address all elements described in subtask 3.1 (Identify Data Conversion Specifications).
	• The Data Conversion Specifications for each data source incorporate, and are consistent with, County-provided input.
	• The Data Conversion Specifications for each data source have been Approved by County.
	• The Risk Analysis Document addresses all elements described in subtask 3.1 (Identify Data Conversion Specifications).
	• The Risk Analysis Document demonstrates substantial detail and breadth of scope as determined by County, and incorporates, and is consistent with, County-provided input.
	• The risks analysis document has been Approved by County.

Task 3 Develop Data Conversion Specifications	
○ Manual. • Filtering rules for the migrated data, including data elements to filter out; • Attributes used to identify duplicate patient data from multiple data sources; • Algorithm to merge duplicate patient data from multiple data sources and/or data from patients with multiple records/MPIs; • Roles and responsibilities for Contractor, County and third-party vendors (if applicable); • Resource requirements (i.e., time commitments for data conversion team members); • Storage requirements for data to be converted; and • Conversion procedures, including: ○ Process for entering "catch-up" transactions into the Licensed Software during cutover tailored to each source system/data source (e.g., outpatient vs. ED); ○ Approach for migrating data of inpatients (scheduled appointments, pending orders, partial results, MAR, etc.); and ○ Process for medication reconciliation. Contractor will make available tools, software and Best Practices that may facilitate addressing the County data conversion requirements for all type of data conversion (automated, semi-automated, or manual). During the development of the Data Conversion Specifications, Contractor will update the Risk Analysis Document developed in subtask 2.1 (Confirm and Validate Data Sources) which (a) identifies and documents issues, risks and barriers that may interfere with the data conversion work stream and (b) proposes recommendations and options for mitigating the identified risks, including identifying: • Data which Contractor cannot convert or has	

Task 3 Develop Data Conversion Specifications	
not been able to convert in the past; • Any systems for which Contractor has experienced problems converting data in the past; • Data sources where the “catch-up” or cutover process involves greater complexity, labor or risk; • Alternative access mechanisms for data that will not be converted; • Potential issues connecting/reconciling MPIs across data sources; • The source system’s inability to filter the data; and • Historical data or data sources for which the cost and/or effort of the data conversion likely outweighs its benefit.	

Task 4 Conduct Data Conversion Pilot
Task Description
Contractor and County will conduct a data conversion pilot prior to deployment in order to: • Verify conversion load sequence and dependencies. • Determine approximate timing for every load, validation, and quality assurance review to estimate how long the data conversion activities will take. • Validate that legacy data is "clean", e.g., missing data is created, duplicate records are eliminated, legacy non-integrated data reconciles once loaded mutually with County. • Refine existing data validation procedures that ensure that each conversion loaded properly and that interdependent data conversions reconcile.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Integration Architect;
  ○ Interface Architect; and
  ○ Data Conversion Team.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Database Analyst;
  ○ Data Architect;

Task 4 Conduct Data Conversion Pilot	
○ Testing Lead; and ○ County Data Conversion SOW Lead. • Third-Party System Vendor Interface Lead.	
Subtasks/Deliverables	
Subtask 4.1 Execute Data Conversion Pilot For each data source, Contractor will create a Pilot Data Conversion Plan that can be leveraged for the Production Cutover Plan. Contractor will assist County in implementing the recommendations set forth in the specifications (including developing and implementing a filtering process for data to be migrated into the Licensed Software). If applicable, Contractor will make Extract, Transfer and Load tools available to implement the data migration strategy. County and third-party system vendors will identify a sample set of data to be converted during the data conversion pilot. Contractor will review sample data with County, solicit and incorporate input, then finalize the pilot data set. Contractor will support County in extracting pilot data from source systems, cleansing the data and uploading the data into the Licensed Software. Contractor will support the County in validating the data in the Licensed Software, including: • Verification of migration load sequence/timing; • Missing data highlighted/created; • Legacy data reconciled once loaded; • Verification of conversion load sequence and dependencies (e.g., loading the parent data prior to child data); • Validation that legacy data is "clean"(e.g., missing data is created, duplicate records are eliminated, legacy non-integrated data reconciled once loaded); and • Validation that data is loaded in the correct business context. Contractor will log issues discovered during the	**Deliverable 4.1 Data Conversion Pilot** • Pilot Data Conversion Plan. • Pilot Data Conversion Report • Updated Data Conversion Specifications. • County Approved completed successful pilot data conversion. **Acceptance Criteria:** • Resolution of all outstanding issues defined as required for moving forward to Integration Testing. • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All issues that remain, but are not essential to Integration Testing, but essential to Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified. • The Data Conversion Pilot Report has been Approved by County. • The Data Conversion Pilot Report addresses all elements described in subtask 4.1 (Execute Data Conversion Pilot). • The Data Conversion Pilot Report incorporates, and is consistent with, County-provided input. • The Data Conversion Pilot Report has been Approved by County. • The updated Data Conversion Specifications incorporate, and are consistent with, County provided input. • The updated Data Conversion Specifications have been Approved by County.

Task 4 Conduct Data Conversion Pilot	
data conversion pilot in an issue log and identify resolution. Contractor will resolve issues and repeat the data conversion pilot until all critical issues have been resolved and Approved by County. Contractor will support County in piloting the catch-up process and contingency procedures. Contractor will monitor the data conversion and validation process and prepare a Pilot Data Conversion Report, including: • Recommendations for refining the Data Conversion Specifications; • Estimated conversion duration and schedule for converting all data identified based on successful pilot; • Recommendations for mitigating impact on system performance/response time while data migration is in progress; and • Refinement of validation and quality assurance procedures to ensure that each conversion is loaded properly, and that interdependent conversions reconcile. Contractor will review Pilot Data Conversion Report with County and (a) update the Data Conversion Specifications with new information based on timing in pilot, and (b) incorporate any other feedback and input from County. Upon completion of final successful pilot, Contractor will jointly decide with the County through the governance process when the data conversion for each source system is ready for Integration Testing.	

Task 5 Conduct Data Conversion
Task Description
Using the Data Conversion Implementation Strategy Document and Data Conversion Specifications, outcome and lessons learned from the data conversion pilot, and the direction provided in the Production Cutover Plan developed in subtask 5.1(Develop Production Cutover Plan) of Exhibit A.23 (Deployment Statement of Work), Contractor will perform data conversion, moving the converted data into data staging environment and subsequently into production environment.

Task 5 Conduct Data Conversion	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Solution Delivery Consultant;
  ○ Interface Architect;
  ○ System Engineer; and
  ○ Data Conversion Team.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface SOW Lead;
  ○ Domain Workgroup Leads;
  ○ Data Architect;
  ○ Data Conversion SOW Lead; and
  ○ Testing Lead.
• Third-Party System Vendor Interface Lead.	

Subtasks/Deliverables	
Subtask 5.1 Perform Data Conversion Contractor will convert all relevant data from existing system(s) to staging and production environments in accordance with the Data Conversion Specifications, associated timelines, and the Production Cutover Plan developed in subtask 5.1(Develop Production Cutover Plan) of Exhibit A.23 (Deployment Statement of Work). Contractor will monitor the data conversion process and report to County any issues. Contractor will coordinate all data conversion activities with other relevant deployment activities set forth in Exhibit A.23 (Deployment Statement of Work).	**Deliverable 5.1 Data Conversion Executed in Staging Environment** • Data conversion in all relevant Licensed Software staging environments (staging, production, etc.). • Data Conversion readiness report. **Acceptance Criteria:** • The Data conversion in Licensed Software staging environment has been Approved by County. • The data conversion readiness report has been Approved by County.

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.19 (Security Statement of Work)

to the

Electronic Health Records System and Services Agreement

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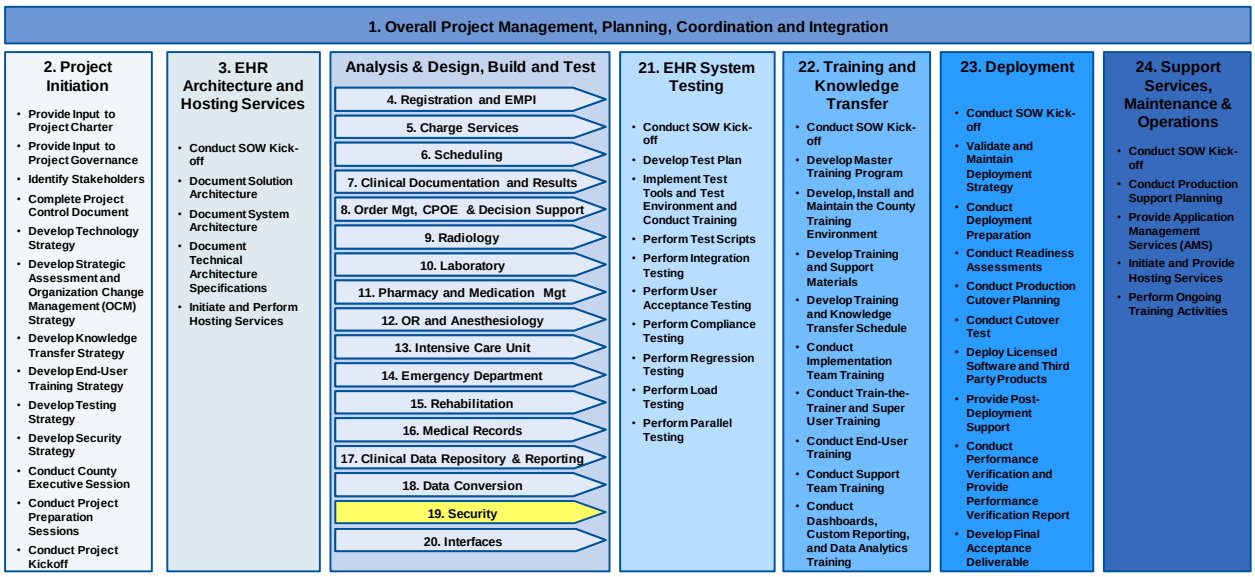
1. Introduction

This Exhibit A.19 (Security Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.19 (Security Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.19 (Security Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will (a) provide the designated County Workgroup training and preparation in fundamentals of Licensed Software and Third-Party Products use, (b) analysis of current state workflow,

(c) recommendations from Contractor for design, configuration and testing approach, and (d) some implementation elements of the software components which are necessary to deliver Security as part of the EHR System.

All care venues will be incorporated into the preparation, kick-off, current state assessment, system review/design build, and system validation. The needs of County-identified care providers and specialties will be an integrated part of the build and validation process. External sources of information will be incorporated, as will downstream users of Security functionality, both internal and external. In addition, automated data capture devices that "interface" directly and indirectly will be accommodated.

3. SOW Summary

3.1 Overview

This SOW describes the Security tasks, subtasks, and Deliverables required for successful completion of the Project. It describes the work plan and initiation session for this sub-project; the process for documenting and validating security objectives and requirements for the Licensed Software; the setup, deployment and monitoring in accordance with security requirements; and the setup of user roles and authorizations.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Service Statement of Work) provides the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.19 (Security Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.19 (Security Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The detailed durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Security SOW Lead**" or "**County SOW Lead**". The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project Status Meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings and work sessions related to the completion of this SOW.

(12) County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Detailed Sub-Project Work Plan for Security	Deliverable 1.1 Sub-Project Work Plan for Security
Subtask 1.2 Conduct Initiation Session for Security Workgroup	Deliverable 1.2 Security Initiation Session (Key Deliverable)
Task 2 Document Security Objectives and Protection Requirements	
Subtask 2.1 Document Security Objectives and Protection Requirements	Deliverable 2.1 Security Objectives and Protection Requirements
Subtask 2.2 Develop System Security Plan	Deliverable 2.2 System Security Plan (Key Deliverable)

Task/Subtask Name	Deliverables
Task 3 Implement Security Monitoring and Auditing Infrastructure and Processes	
Subtask 3.1 Set Up and Configure Security Monitoring and Auditing Infrastructure and Processes	Deliverable 3.1 Monitoring and Auditing Infrastructure and Processes
Subtask 3.2 Deploy Security Monitoring and Auditing Tools	Deliverable 3.2 Security Monitoring and Auditing Tools (Key Deliverable)
Task 4 Implement Roles and Provision Users	
Subtask 4.1 Document User Security Profiles (Roles and Authorizations)	Deliverable 4.1 User Security Profiles Document
Subtask 4.2 Implement User Roles and Authorizations	Deliverable 4.2 User Roles and Authorizations
Subtask 4.3 Populate User Roles and Authorizations	Deliverable 4.3 User Roles and Authorizations Populate to Production Environment

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverable Expectations Document (also referred to as "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off	
Task Description	
The team members from Contractor, and County, and external stakeholders will be introduced and their specific roles will be described. Security-specific training on the Licensed Software and Third-Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Security Workgroup**" or "**County Workgroup**" and the County Security Workgroup will be introduced to various Contractor tools, methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Resources
  ○ Core Architect;
  ○ Core Delivery Consultant; and
  ○ Integration Architect.
• County Resources
  ○ County Security SOW Lead;
  ○ County Security SOW Workgroup; and
  ○ IT Analyst.	

Subtasks/Deliverables	
Subtask 1.1 Develop Sub-Project Work Plan for Security As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Security-specific section. The overall Project Work Plan will include a Project	**Deliverable 1.1 Sub-Project Work Plan for Security** • Security-specific section of Project Work Plan. • Sub-Project Work Plan for Security.

Task 1 Conduct SOW Kick-off	
Schedule, and will be developed in a MethodM Online-compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks, both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.19 (Security Statement of Work) and subject to County Approval.	**Acceptance Criteria:** • The Security-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The Security-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Detailed Sub-Project Work Plan for Security). • The Security-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the Security-specific section of the Project Work Plan and sub-Project Work Plans are realistically achievable with reasonable effort as determined by County. • Elements of the Security-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Confirmed availability of Contractor resources required to implement the Security sub-Project Work Plan. • Sub-Project Work Plan for Security addresses all elements described in subtask 1.1 (Develop Detailed Sub-Project Work Plan for Security) and has been Approved by County.
Subtask 1.2 Conduct Initiation Session for Security Workgroup Contractor will conduct a Security Initiation Session to provide an introduction to the County Workgroup to the Services covered by this Exhibit A.19 (Security Statement of Work), including the timelines and nature of the work effort that will be required to implement this SOW. Before the Security Initiation Session, Contractor will: • Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW; • Provide County with a roster of kick-off	**Deliverable 1.2 Security Initiation Session** • Security Initiation Session materials for County review one (1) week prior to Security Initiation Session. • Initial list of County Domains, Venues and Locations for which Security capabilities must be delivered for review during Security Initiation Session. • Report documenting Security SOW dependencies. • List of County Workgroup members who attended the Security Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup.

Task 1 Conduct SOW Kick-off	

participants;
• Conduct a Project Management Workshop; and
• Develop an agenda/schedule for the Security Initiation Session.
Contractor will conduct the Security Initiation Session as follows:
• Review and document Licensed Software Modules, Domains, Venues and Locations for which Security capabilities must be delivered within County;
• Illustrate and document dependencies between the Security SOW and any other SOWs and Project work streams; including at a minimum:
  ○ Requirements gathering and functional/technical Specifications during system review, design review and system validation
  ○ Testing, including Integration Testing, Peripheral Device testing and User Acceptance Testing;
  ○ Go-Live readiness assessment; and
  ○ Post-Go-Live assessment.
• Review tasks, Deliverables and Milestones for the development of Security.
• Train the County Workgroup on the required processes and tools used to support the implementation of this SOW.
• Provide the County Workgroup with an overview of MethodM including system and design review activities and data collection processes.
After the Security Initiation Session, Contractor will prepare a Security Initiation Session Event Summary Report for review and Approval by County.
	• Security Initiation Session Event Summary Report.
	• Agenda/schedule for Security Initiation Session.
	• Security Initiation Session presentation materials.
	
	Acceptance Criteria:
	• The Security Initiation Session Event Summary Report from Contractor documenting that Security Initiation Session (a) has been completed, and (b) includes accurate documentation of the content, outcomes and next steps agreed upon at the Security Initiation Session Event.
	• The Security Initiation Session Event Summary Report has been Approved by County.
	• Report documenting Security SOW dependencies addresses all elements described in subtask 1.2 (Conduct Initiation Session for Security Workgroup).
	• Report documenting Security SOW dependencies has been Approved by County.
	• Agreed upon and understood learning objectives for County personnel.
	• Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

Task 2 Document Security Objectives and Protection Requirements	
Task Description	
Contractor will document and validate with County the security objectives and protection requirements for the EHR System in accordance with the Agreement.	
Personnel Requirements	

• Contractor Resources
  ○ Core Architect;
  ○ Core Delivery Consultant; and
  ○ Integration Architect.
• County Resources
  ○ County Security SOW Lead;
  ○ County Security SOW Workgroup Members; and
  ○ IT Analyst.	

Subtasks/Deliverables	

Subtask 2.1 Document Security Objectives and Protection Requirements
Contractor will draft a Security Protection Requirements Document outlining security threats, risk, security objectives (confidentiality, integrity, availability, user control, accountability) and relevant protection requirements that address current risks and those foreseen by the time implementation is complete. The Security Protection Requirements Document will:
• Define the solution security protection framework including:
  ○ Authentication;
  ○ Authorization;
  ○ Auditing;
  ○ Data confidentiality and integrity;
  ○ Data validation and content scanning; and
  ○ Management and administration.
• Identify existing security protection capabilities within County that are applicable to the EHR System;
• Identify any differences between existing County capabilities and EHR System capabilities, noting where existing County protection capabilities are weaker or stronger (more secure);
	Deliverable 2.1 Security Objectives and Protection Requirements
	• Security Protection Requirements Document.
	• Security Assessment document.
	• Security Protection Requirements Document and Security Assessment validation session.
	
	Acceptance Criteria:
	• County Approved Security Protection Requirements Document.
	• County Approved Security Assessment document.

Task 2 Document Security Objectives and Protection Requirements	

• Identify how the EHR System will leverage existing County security protection capabilities to improve the overall security of the EHR System and/or make the user experience simpler (e.g. reduce the need to sign in to the Licensed Software separately by leveraging the County's existing access control capabilities);
• Identify additional security considerations for County to consider mitigating known vulnerabilities in the EHR System, including the Licensed Software;
• Map each protection requirement to identified County security threat and risk to enable non-technical hospital management to quickly and easily understand the likelihood and impact of any security-related risk as justification for protection requirement;
• Map each security and privacy requirement of the Agreement to a description of the physical or logical protections designed to address the requirement along with reference to the implementation strategy, if applicable, for each protection;
• Ensure the protection requirements address all relevant legal and regulatory requirements including but not limited to the following items (attach all these requirements to the document):
  ○ Federal, State and County mandated information protection requirements (e.g., HIPAA/HITECH);
  ○ Contractor Hosting Services and Hosting Environment security policies;
  ○ Physical security requirements at County facilities as they relate to the EHR System; and
  ○ Information protection requirements specified in Section 20 (Security) of the Agreement and Exhibit K (Information Protection Requirements) and Exhibit N (Hosting Services) to the Agreement.	

Task 2 Document Security Objectives and Protection Requirements	

• Document the target security architecture and map relevant the Licensed Software security features and functions (e.g. access controls, authentication, encryption) to the following key architecture components:
  ○ Authentication;
  ○ Authorization;
  ○ Access Governance;
  ▪ Roles, rules, entitlements, policy management; and
  ▪ Access request and approval workflow.
  ○ Auditing;
  ○ Data confidentiality and integrity;
  ○ Data validation and content scanning;
  ○ Network security; and
  ○ Management and administration.
Contractor will perform a high level Security Assessment of shortcomings in the current County security environment and provide recommendations with regard to the implementation and use of the EHR System The Security Assessment will be developed using, at a minimum,
• Interviews with security stakeholders within each County facility (both business and IT stakeholders);
• Contractor's knowledge base; and
• The expertise of the facilities and the Contractor's SMEs.
The Security Assessment should identify current vulnerabilities and the controls being implemented within the EHR System to mitigate the related risk.
Contractor will conduct a validation session of the draft Security Protection Requirements Document and Security Assessment with County.
Contractor will incorporate County feedback and proposed changes into the Security Assessment and Security Protection Requirements Document and submit a final version to County for	

Task 2 Document Security Objectives and Protection Requirements	
Approval.	
Subtask 2.2 Develop System Security Plan Contractor will draft a System Security Plan to ensure that application security will be addressed throughout the Project's entire lifecycle. The System Security Plan includes: • Description of the application security; • Security risks and concerns; • Roles and responsibilities; and • Security Project management requirements. Security-specific Project Deliverables based on subtask 2.1 output (Document Security Objectives and Protection Requirements) covering end-to-end information protection in all states (at rest/motion/use). Contractor will conduct a review session of the draft System Security Plan and risk assessment with County. Contractor will incorporate County feedback and proposed changes into the System Security Plan and submit a final version to County for Approval. Throughout the Project, Contractor will periodically review and update the System Security Plan. Contractor will alert County of potential issues and mitigate security issues early on in the Project life cycle.	**Deliverable 2.2 System Security Plan** • System Security Plan. • System Security Plan review session. **Acceptance Criteria:** • County Approved System Security Plan; • Final System Security Plan addresses all required elements described in Task 2.2 (Develop System Security Plan); and • Final System Security Plan is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 3 Implement Security Monitoring and Auditing Infrastructure and Processes
Task Description
Contractor will set up, test, and deploy the infrastructure and processes required for the monitoring and auditing of security including all activities necessary to ensure that the security monitoring and auditing infrastructure and processes will be ready and operate in accordance with the security requirements by the time of Go-Live.
Personnel Requirements

• Contractor Resources
  ○ Core Architect;
  ○ Core Delivery Consultant;
  ○ DeviceWorks Delivery Consultant; and
  ○ Integration Architect.
• County Resources

Task 3 Implement Security Monitoring and Auditing Infrastructure and Processes	
○ County Security SOW Lead; ○ County Workgroup Members; and ○ IT Analyst.	
Subtasks/Deliverables	
Subtask 3.1 Set Up and Configure Monitoring and Auditing Infrastructure and Processes Contractor will set up and configure monitoring and auditing infrastructure and processes in accordance with the System Security Plan in subtask 2.2 (Develop System Security Plan). Contractor will setup security monitoring infrastructure and document processes in Security Monitoring Infrastructure Documentation and Security Monitoring Process Documentation that includes: • Security monitoring tools; • Vulnerability management; • Security information and event management; • Roles and responsibilities of Contractor and County; • Privilege access monitoring; • Incident management; and • Change management. Contractor will setup security auditing infrastructure and document processes in Security Auditing Infrastructure Documentation and Security Auditing Process Documentation that include: • Security auditing tools (e.g., P2Sentinel); • Roles and responsibilities of Contractor and County; • Audit Issue management; • Escalation procedures; and • Incident notification and risk assessment and mitigation. Throughout the Project, Contractor will periodically review and update the System Monitoring and Auditing Infrastructure and Processes Documentation. Contractor will alert County of potential issues and mitigate security	**Deliverable 3.1 Monitoring and Auditing Infrastructure and Processes** • Security Monitoring Infrastructure Documentation. • Security Monitoring Process Documentation. • Security Auditing Infrastructure Documentation. • Security Auditing Process Documentation. **Acceptance Criteria:** • County Approved Security Monitoring Infrastructure Documentation. • County Approved Security Monitoring Process Documentation. • County Approved Security Auditing Infrastructure Documentation. • County Approved Security Auditing Process Documentation.

Task 3 Implement Security Monitoring and Auditing Infrastructure and Processes	
issues early on in the project lifecycle.	
Subtask 3.2 Deploy Security Monitoring and Auditing Tools Contractor will deploy the Security Monitoring and Auditing Tools related to Licensed Software and Third-Party products, including: • Design, configure, and test infrastructure for the Security Monitoring and Auditing Tools; and • Train County personnel on accessing Security Monitoring and Auditing Tools, dashboards and reports.	**Deliverable 3.2 Security Monitoring and Auditing Tools** • Security Monitoring and Auditing Tools. **Acceptance Criteria** • County Approved Security Monitoring and Auditing Tools.

Task 4 Implement Roles and Provision Users	
Task Description	
Contractor will identify and set up user roles and the required authorizations for Licensed Software and Third-Party Product access.	
Personnel Requirements	

• Contractor Resources
  ○ Core Architect;
  ○ Core Delivery Consultant; and
  ○ Integration Architect.
• County Resources
  ○ County Security SOW Lead; and
  ○ IT Analyst.	

Subtasks/Deliverables	
Subtask 4.1 Document User Security Profiles (Roles and Authorizations) Contractor will assist County in completing security Data Collection Workbooks ("**DCWs**") in collaboration with all other SOW workgroups and in accordance with the tasks and Deliverables specified in Exhibits A.4 – A.18 to the Agreement. Contractor will review DCWs and highlight issues and provide County with recommendations for addressing identified issues based upon Contractor Best Practices and other client experiences and approaches. Contractor will draft an Enterprise-wide User Security Profiles Document that includes:	**Deliverable 4.1 User Security Profiles Document** • Enterprise-wide User Security Profiles Document. • Enterprise-wide User Security Profiles Document review session. • Training on user provisioning and user account management. **Acceptance Criteria:** • County Approved Enterprise-wide User Security Profiles Document. • County Approved required authorizations for

Task 4 Implement Roles and Provision Users	
• Approach to defining and documenting standardized user security profiles and required authorizations for system access, as well as for administrative access to "back office" solution components such as databases, servers, production data, etc.; • User roles for accessing Licensed Software, Third-Party Products, and Hosting Software; • Policies and procedures for provisioning and de-provisioning user identities based on Best Practices for identity and access management solutions; and • Training materials for County personnel to provision users and managing user accounts. Contractor will conduct a review session of the Enterprise-wide User Security Profiles Document with County, including SMEs from all relevant SOWs and work streams. Contractor will incorporate County feedback and proposed changes into the Enterprise-wide User Security Profile Document and submit a final version to County for Approval. Contractor will conduct training of County personnel on user provisioning and user account management in accordance with Exhibit A.22 (Training and Knowledge Transfer Statement of Work).	system access. • County Approved policies and procedures for provisioning and de-provisioning user identities.
Subtask 4.2 Implement User Roles and Authorizations Contractor will support County implementation of user roles and authorizations, including: • Integration of roles with existing County Identity Access Management (**"IAM"**) capabilities; • Providing assistance in the setup of user roles within existing County IAM systems, if available; • Setup roles within the EHR System; and • Setup of the required authorizations for EHR System access, including privileged uses (as described in the comment above).	**Deliverable 4.2 User Roles and Authorizations** • Implemented user roles and authorizations. • Documentation and tools to support County implementation of user roles and authorizations. • User Role and Authorization Test Plan. **Acceptance Criteria:** • County Approved user roles. • County Approved authorizations for system access. • County receipt of documentation and tools to support County implementation of user roles

Task 4 Implement Roles and Provision Users	
Contractor will document, and provide tools, and advice to support the County implementation of user roles and authorizations, including: • Governance mechanisms for the maintenance of roles over time; • Suggested change management processes; • Suggested provisioning process; and • Staff training, for the implementation and maintenance and revision of roles on an ongoing basis. Contractor will develop and document User Role and Authorization Test Plan that includes: • Input into Domain-specific test scripts and test data; • Security test scripts for monitoring and audit tools; • Testing process; and • Process for reporting and fixing testing defects.	and authorizations. • County Approved User Role and Authorization Test Plan.
Subtask 4.3 Populate User Roles and Authorizations Contractor will validate County provided list of users and roles. Contractor will migrate all user roles and authorizations for EHR System access into the training and Production Environments as it relates to the roles in the EHR System. Contractor will assist County in creating generic user accounts in the training environments for each Cluster. Contractor will provision users in the Production Environments for each Cluster. Contractor will migrate all relevant data in accordance with the Production Cutover Plan developed in subtask 5.1 (Develop Production Cutover Plan) of Exhibit A.23 (Deployment Statement of Work). Contractor will document: • User security profiles, including roles and authorizations; and	**Deliverable 4.3 User Roles and Authorizations Populate To Production Environment** • Documented user security profiles, including roles and authorizations. • Migrated user roles and authorizations for system access into the Production Environment. **Acceptance Criteria:** • User roles successfully migrated. • County Approved user security profiles.

Task 4 Implement Roles and Provision Users	
• Users provisioned. Contractor will coordinate migration activities with other relevant deployment activities set forth in Exhibit A.23 (Deployment Statement of Work).	

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.20 (Interfaces Statement of Work)

to the

Electronic Health Records System and Services Agreement

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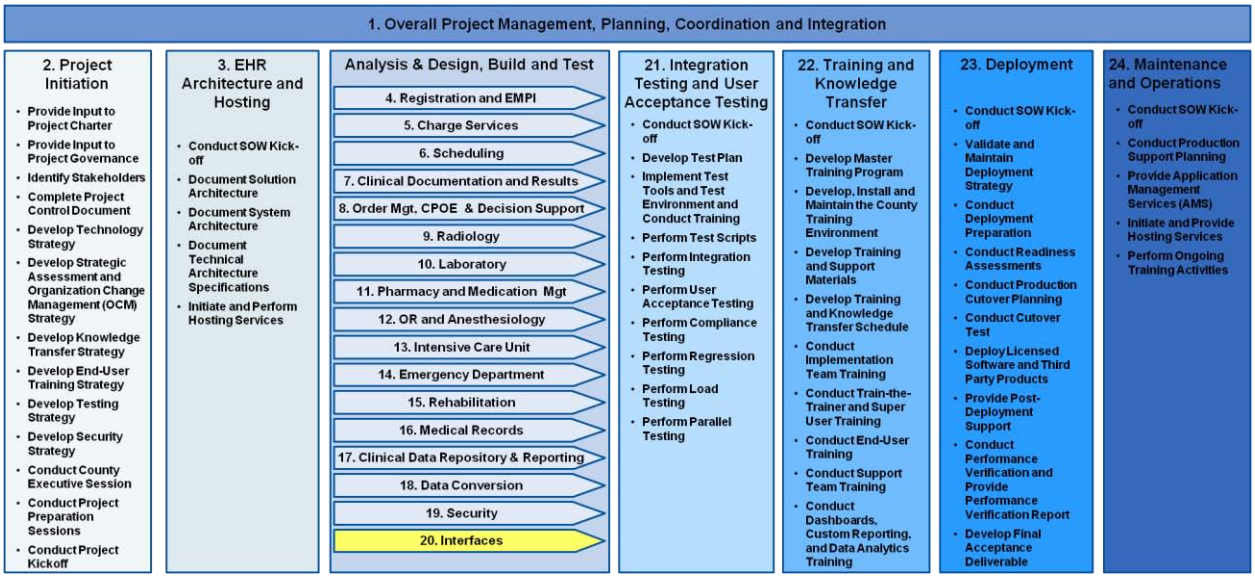
1. Introduction

This Exhibit A.20 (Interfaces Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the all the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.20 (Interfaces Statement of Work). The completion of any phase in a period of time shorter or longer that that specified below will not increase the Contract Sum.

This is Exhibit A.20 (Interfaces Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide the framework which will be used to design, build, test, and install Interfaces for this EHR implementation.

3. SOW Summary

3.1 Overview

This SOW describes the tasks, subtasks and Deliverables necessary to design, build and test Interfaces required by County.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provides the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – Executive leadership from Contractor, DHS, and the DHS CIO must be involved in the Project and meet at regular intervals to discuss the Project's progress and reach agreement on decisions that have been escalated to their level.

3.5 Schedule

The commencement date for this Exhibit A.20 (Interfaces Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work). This SOW is scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.20 (Interfaces Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for tasks and sub-task, including a Key Milestone table will be developed as part of the Project Control Document. The detailed durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of Deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates

Contractor will perform this activity throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Interfaces SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverable set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project Status Meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Detailed Sub-Project Work Plan for Interfaces	Deliverable 1.1 Sub-Project Work Plan for Interfaces
Subtask 1.2 Conduct Initiation Session for Interfaces Workgroup	Deliverable 1.2 Interface Initiation Session (Key Deliverable)
Task 2 Perform Current State Assessment	
Subtask 2.1 Document Interfaces Current State Assessment	Deliverable 2.1 Interfaces Current State Assessment
Subtask 2.2 Prepare Interfaces Implementation Strategy Document	Deliverable 2.2 Interfaces Implementation Strategy Document
Task 3 Design Interfaces	
Subtask 3.1 Document Functional and Technical Specifications for Interfaces	Deliverable 3.1 Functional and Technical Specifications for Interfaces
Subtask 3.2 Develop Interface Test Plan	Deliverable 3.2 Interface Test Plan (Key Deliverable)
Task 4 Build and Test Interfaces	
Subtask 4.1 Build and Test Interfaces	Deliverable 4.1 Tested Interfaces (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable will be developed in accordance with the following Contractor's obligations, which will be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document ("**DED**") Approved by the County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template).

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and, distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and analyze County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee will notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor will make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable will be provided to County with a request for Acceptance. County will notify Contractor of it Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off	
Task Description	
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Interfaces-specific training on the Licensed Software and Third-Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Interfaces Workgroup**" or "**County Workgroup**" and the County Interfaces Workgroup will be introduced to various Contractor tools, existing Interface libraries, Interface methodologies, and Best Practice recommendations that will be used throughout this SOW.	
Personnel Requirements	

• Contractor Key Employees
  ○ Project Director;
  ○ Project Manager;
  ○ Integration Architect; and
  ○ Interface Solution Architect
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface SOW Lead; and
  ○ County Interface Workgroup.	

Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Sub-Project Work Plan for Interfaces As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include an Interface-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and	**Deliverable 1.1 Sub-Project Work Plan for Interfaces** • Interfaces-specific section of Project Work Plan. • Sub-Project Work Plan for Interfaces. **Acceptance Criteria:** • The Interfaces-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The Interfaces-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Detailed Sub-Project Work Plan for Interfaces). • The Interfaces-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the Interfaces-specific section of the Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County.

Task 1 Conduct SOW Kick-off	
• Milestones and Key Milestones. Contractor will adapt the Interfaces-specific section of the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.20 (Interfaces Statement of Work) and subject to County Approval.	• Elements of the Interfaces-specific section of the Project Work Plan are consistent with Tasks, subtasks, and deliverables as outlined in this and other SOWs. • Confirmed availability of Contractor resources required to implement the Interfaces sub-Project Work Plan.
Subtask 1.2 Initiation Session for Interfaces Workgroup Contractor will conduct an Interfaces Initiation Session to provide an introduction to the County Workgroup to the Services covered by this Exhibit A.20 (Interfaces Statement of Work), including the timelines and nature of the work effort that will be required to implement this SOW. Before the Interfaces Initiation Session, Contractor will: • Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW; • Provide County with a roster of Interfaces Initiation Session participants; • Conduct a Project Management Workshop as described in task 12 (Conduct Project Preparation Sessions) of Exhibit A.2 (Project Initiation Statement of Work); and • Develop a written agenda/schedule for the Interfaces Initiation Session. The Interfaces Initiation Session will include the following: • Review and document Licensed Software Modules and Third-Party Products, Domains, Venues and Locations for which Interface capabilities must be delivered within County; • Illustrate and document sample dependencies and an approach to identify all of the dependencies between this SOW and any other SOWs and Project work streams; including at a minimum: ○ Requirements gathering and functional/technical Specifications during	**Deliverable 1.2 Interfaces Initiation Session** • Interfaces Initiation Session materials for County. • Initial list of County Domains, Venues and Locations for which Interfaces capabilities must be delivered. • Report documenting Interfaces Statement of Work dependencies. • List of County Workgroup members who attended the Interfaces Initiation Session. • List of assignments and roles associated with those assignments for members of County Workgroup. • Interfaces Initiation Session Event Summary Report. • Interface Statement of Work kick-off presentation materials. • Interface Statement of Work kick-off Event Summary Report. **Acceptance Criteria:** • The Initiation Session Event Summary Report from Contractor documenting that the Interfaces Initiation Session (a) has been completed and (b) includes accurate Documentation of the content, outcomes and next steps agreed upon at the Interfaces Initiation Session. • The Interfaces Initiation Session Event Summary Report has been Approved by County. • Report documenting sample Interfaces Statement of Work dependencies and a plan

Task 1 Conduct SOW Kick-off	
system review, design review and system validation; ○ Testing, including Integration Testing, Peripheral Device Testing and User Acceptance Testing; ○ Go-Live readiness assessment; and ○ Post-Go-Live assessment. • Review tasks, Deliverables and Milestones for the development of Interfaces; • Train the County Workgroup on the required methodology used to support Contractor in conducting the current state assessment, purpose and expected outcome of the assessment, and related activities; and • Provide the County Workgroup with an overview of MethodM including system and design review activities and data collection processes. After the Interfaces Initiation Session, Contractor will prepare an Interfaces Initiation Session Event Summary Report for review and Approval by County.	to identify and address all others as described in subtask 1.2 (Conduct Initiation Session for Interfaces Workgroup). • Report documenting Interfaces Statement of Work dependencies has been Approved by County. • Agreed upon and understood learning objectives for County personnel. • Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

Task 2 Perform Current State Assessment
Task Description
Contractor will identify and validate the necessary Interfaces and develop an Interface Requirements Document.
Personnel Requirements
• Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; ○ Integration Architect; ○ Solution Architects; ○ Contractor Engagement Leader; ○ Technical Engagement Leader; ○ Interface Architect; ○ Lab Solution Architect; ○ Radiology Solution Architect; and ○ Registration Solution Architect. • County Key Resources ○ County Project Director;

Task 2 Perform Current State Assessment	
○ County Project Manager; ○ County Interface SOW Lead; and ○ Other County SOW Leads, as applicable.	
Subtasks/Deliverables	
Subtask 2.1 Document Interfaces Current State Assessment Contractor will perform an Interfaces Current State Assessment as it relates to the Licensed Software and Third-Party Products, and document the assessment in the template-based structured OWA tool on MethodM Online. Contractor will draft an Interfaces Current State Assessment that includes the following: • All existing Interfaces; • Source systems for Interfaces to and from Licensed Software; • Target systems for Interfaces to and from Licensed Software Interfaces; • County will provide vendor contacts required for Interfaces with any third-party system, and any other applicable information regarding such third-party systems; • High level Interface description (types of data, messaging, and Interface tools and strategy); • Projected transaction volume and frequency provided by County; • Identification of existing Contractor Interfaces that meet or may facilitate addressing the County Interface requirements (For the avoidance of doubt, prior Contractor Interface work and tools are to be made available to County as part of the Services). Contractor will analyze the findings of the Interfaces Current State Assessment and prepare a Risk Analysis Document that (a) identifies and documents issues, risks and barriers that may interfere with the Interfaces work stream, and (b) proposes recommendations and options for mitigating the identified risks, including:	**Deliverable 2.1 Interfaces Current State Assessment** • Interfaces Current State Assessment including completed OWA tool and identified risks. • Risk Analysis Document with recommendations for workarounds that include recommendations that have a high likelihood of improving: ○ Efficiency; ○ Patient safety; ○ Quality of care; and ○ Patient experience. **Acceptance Criteria:** • The Interfaces Current State Assessment is stored on a discrete SOW-specific section of MethodM Online, and it incorporates, and is consistent with, County-provided input. • The Interfaces Current State Assessment and analysis addresses all elements described in subtask 2.1 (Document Interfaces Current State Assessment). • The Interface Current State Assessment has been Approved by County. • The Risk Analysis Document demonstrates substantial detail and breadth of scope as determined by County. • The Risk Analysis Document has been Approved by County.

Task 2 Perform Current State Assessment	
• Identifying (a) any Interfaces which Contractor cannot develop or has not been able to develop in the past, (b) any third-party systems for which Contractor has experienced problems developing Interfaces in the past; • Identifying problematic service level agreements with third-party systems for which County requires an Interface; and • Identifying Interfaces for which a workaround may be required, and any limitations associated with the applicable workaround. Contractor will develop a Risk Analysis Document using industry standards, Best Practices, Contractor's knowledge base and the expertise of Contractor's SMEs. Contractor will review the draft Interfaces Current State Assessment with County. Contractor will incorporate County feedback and proposed changes into the Interfaces Current State Assessment and OWA and submit the updates to County for Approval.	
Subtask 2.2 – Prepare Interfaces Implementation Strategy Document Contractor will prepare an Interfaces Implementation Strategy Document, which, at a minimum, will: • Identify any existing systems or Interfaces that will be (a) discontinued, (b) retained and replaced with new systems/Interfaces to Licensed Software, or (c) added; • Specify the timing, sequencing and coordination of the development and implementation of each Interface that is tied to (a) the timing of related/applicable SOWs and work streams and (b) the phased deployment strategy for the Project; • Identify potential temporary Interfaces needed during the phased deployment of the system; • Specify data conversion requirements, and	**Deliverable 2.2 Interfaces Implementation Strategy Document** • Interfaces Implementation Strategy Document. • Updated detailed sub-Project Work Plan(s) for Interfaces that specify when each Interface will be developed and completed. **Acceptance Criteria:** • The Interfaces Implementation Strategy Document incorporates, and is consistent with, County provided input. • The Interfaces Implementation Strategy Document addresses all elements described in subtask 2.2 (Prepare Interfaces Implementation Strategy Document). • The Interfaces Implementation Strategy Document has been Approved by County.

Task 2 Perform Current State Assessment	
the associated dependencies with ExhibitA.18 (Data Conversion Statement of Work); • Include a draft future state data flow diagram; and • Specify the process and procedures for global Interface downtime and recovery strategy. Contractor will review the draft Interfaces Implementation Strategy Document with County. Contractor will incorporate County feedback and proposed changes into the Interfaces Implementation Strategy Document and submit a final version to County for Approval. Contractor will use the Interfaces Implementation Strategy Document to update the sub-Project Work Plan(s) for Interfaces with information regarding when each Interface will be developed and completed.	• The updated sub-Project Work Plan(s) for Interfaces incorporates, and is consistent with, the information set forth in the Approved Interfaces Implementation Strategy Document, and has been Approved by County. • The updated sub-Project Work Plan(s) includes any tasks and deliverables by third-party vendors to meet the Licensed Software requirements (including dependencies with third-party vendor agreements).

Task 3 Design Interfaces	
Task Description	
For each required Interface, Contractor and County will develop functional and technical Specifications.	
Personnel Requirements	

• Contractor Key Resources
  ○ Interface Architect; and
  ○ Contractor System Engineer.
• County Key Resources
  ○ County Interface SOW Lead	

Subtasks/Deliverables	
Subtask 3.1 Document Functional and Technical Specifications for Interfaces Contractor will coordinate all activities between the County Interface Workgroup and the Project activities associated with (a) the development and deployment of the applicable modules of the Licensed Software, and (b) Exhibit A.18 (Data Conversion Statement of Work), including: • Engaging the County Interfaces Workgroup in the System Review, Design Review, and	**Deliverable 3.1 Functional and Technical Specifications for Interfaces** • Interface Specifications Document for each Interface. • Updated to Interfaces Risk Analysis Document. **Acceptance Criteria:** • The Interfaces Specifications Document for each Interface incorporates, and is consistent

Task 3 Design Interfaces	

System Validation for each Module of the Licensed Software;
• Engaging the County Interfaces Workgroup in the applicable activities of the County Data Conversion Workgroup;
• Assisting County in determining which Interfaces are required for each Module or component of the Licensed Software (if any);
• Documenting any Interface requirements between the Licensed Software and internal and external systems;
• Identifying any dependencies between the development of each Interface and the development and deployment of the applicable Modules/components of the Licensed Software; and
• Identifying requirements associated with migration of the applicable data.
Contractor will draft functional and technical Specifications for each required Interface ("**Interface Specifications Document**") that, at a minimum, specifies the following:
• Name and high level description of the County device/system with which an Interface is required, and a description of the purpose and function of the Interface;
• Requirements of the Licensed Software either to receive or send required elements and values; including:
  ○ Elements and values required by County, the Contractor, and any third-party vendor; and
  ○ Detailed description of what the Interface can or cannot accommodate, the impact to the License Software, and alternatives where required.
• Interface engine(s) that will be used to manage the Interface transactions;
• List of transactions and data content for Interfaces required for each County system/device;
• Specifications for mapping, aliasing and/or
	with, County-provided input.
	• The Interfaces Specifications Document for each Interface addresses all elements described in subtask 3.1 (Document Functional and Technical Specifications for Interfaces).
	• The Interface Specifications Document for each Interface has been Approved by County.
	• The updates to the Risk Analysis Document address all elements described in subtask 3.1 (Document Functional and Technical Specifications for Interfaces) and have been Approved by County.
	• The Interface Specifications Document for each Interface that interacts with a third-party system includes information from the third-party vendor necessary for Contractor to build the Interface

Task 3 Design Interfaces	

transforming the data to conform to the applicable system and to the Licensed Software, including (a) which engine will be used for the transformation of the data, and (b) which data elements County wants to retain in the Clinical Data Repository via the Interface;
• Processes and requirements for Interface management, including filtering, throttling, queuing, retention period, and resending/republishing of messages;
• Performance requirements for each transaction, including real time vs. periodic, latency, etc.;
• Established standard for the Interface transaction (e.g., HL7, ASTM, X12, DICOM, etc.) which will be used for the necessary Interface. If a standard cannot be met, Contractor will propose an alternative (including justification for using something other than an established standard);
• Specifications of the data and transport mechanisms required for the Interface transaction;
• Specifications of device / system operating requirements for the Interface;
• Descriptions of the triggers from other work streams as identified in task 4.1 (Conduct Design Review Session) of Exhibits A.4 – A.18;
• Specifications for monitoring the traffic through the Interface, and reporting requirements to County for unusual traffic;
• Requirements for identification of exception types and exception processing of transactions;
• Specifications for downtime and recovery strategy for each Interface;
• Specifications for Interface connectivity including:
  ○ TCP/IP addresses;
  ○ Ports and firewall rules;	

Task 3 Design Interfaces	
○ Client engines; and ○ Security certifications/VPN. • System administrator account provisioning requirements for Interface access and control; • Bandwidth requirements and transaction volumes, jointly with County and Contractor Interface architect, County and Contractor Systems Engineer; • The role and required contributions of applicable third-party vendors, if any, for the Interface (both to build and maintain the Interface). If Contractor and County cannot agree on Contractor's proposed solution for any Interface that must be built to meet County's requirements, Contractor will expeditiously escalate the issue to the predefined governance process. Contractor will review the functional and technical Interface Specifications Document with County. Contractor will incorporate County feedback and proposed changes into the functional and technical Interface Specifications Document and submit a final version to County for Approval. Contractor will work with the applicable third-party vendors as required for Contractor to create the functional and technical Specifications for each required Interface. Contractor will update the Risk Analysis Document based on the functional and technical Specifications developed for the Interface, to identify any additional issues and barriers that interfere with achieving the objectives of the Interfaces work stream and propose options for mitigating the identified risks, including identifying: • Any Interfaces which Contractor cannot develop or has not been able to develop in the past; • Any third-party systems for which Contractor has experienced problems developing	

Task 3 Design Interfaces	
Interfaces in the past; • Any data types, fields, or segments that Contractor cannot support via an Interface; and • Interfaces for which a workaround may be required, and any limitations associated with the applicable workaround.	
Subtask 3.2 – Develop Interface Test Plan Contractor will develop and document an Interface Test Plan with input and participation from County that, at a minimum, includes: • The testing tools used to test each Interface; • All resources required to test each Interface; • County-specific Unit and System Test scripts for each Interface; • On-site training sessions on the Interfaces to County personnel to allow Unit and System Testing to commence; • Training on overall testing approach and specifically on Unit and System Testing; • Documentation of the appropriate tests which need to be conducted on the Interfaces; • Identification and documentation of the roles and responsibilities of Contractor resources, County Interfaces Workgroup members, third-party vendors, and SMEs who will play a role in Interface validation testing; • A test plan for Unit and System Testing of each Interface; • Samples of Unit Test scripts (including test script for reviewing historical data where applicable) for Interfaces; • Identification and documentation of relevant test scenarios for each Interface; • Identification and documentation of relevant test patient data, and regression test data; • A process for the development of Unit and System Test scripts and test data, including the assumed data for the starting point of the	**Deliverable 3.2 Interface Test Plan** • Interface Test Plan. **Acceptance Criteria:** • The Interface Test Plan incorporates, and is consistent with, County-provided input. • The Interface Test Plan addresses all elements described in subtask 3.3 (Develop Interface Test Plan). • The Interface Test Plan has been Approved by County.

Task 3 Design Interfaces	
unit test scripts; • Identification of any activities required by County team and third-party vendors for testing and validation of Interfaces and ensure that these activities have been assigned to the relevant team members/third-party vendors; • A process to coordinate the timing and scope of Interface testing with applicable testing related to other SOWs and work streams; and • A process to incorporate feedback and County Approved modifications recorded in the Interface Specifications Document. Contractor will review the Interfaces Test Plan with County. Contractor will incorporate County feedback and proposed changes into the functional and technical Interface Specifications Document and submit a final version to County for Approval.	

Task 4 Build and Test Interfaces
Task Description
The Contractor will be responsible for developing the County identified Interfaces between the Contractor's Licensed Software and County's systems and external systems.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Interfaces Architect;
  ○ Contractor Systems Engineer;
  ○ Integration Architect;
  ○ Lab Solution Architect;
  ○ Radiology Solution Architect; and
  ○ Registration Solution Architect.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interfaces SOW Lead;
  ○ County Interfaces Workgroup;
  ○ Domain Workgroup Leads;
  ○ County Lab Lead;

Task 4 Build and Test Interfaces	
○ County Radiology Lead; ○ County Registration Lead; and ○ County Test Lead.	
Subtasks/Deliverables	
Subtask 4.1 Build and Test Interfaces Contractor will build or supply an Interface engine to manage the Interface transactions. At County's discretion, Contractor will either (a) build the complete Interface prior to testing or (b) build each Interface using the partial build approach outlined below. For Interfaces built using the partial build concept, Contractor will: • Iteratively build the Interface's functionality and content until the full build of the Interface content and functionality is complete; • Develop a Release Schedule for the Interface; • Regularly release new functionality in a structured and scheduled manner to the County Unit and System Test environment; • On an ongoing basis, provide the County SOW Lead with an updated Release Schedule as to the new content and functionality delivered in each release of the Interface; • Report weekly on progress toward complete build and alert County of any issues or risks; and • Notify County when each Interface has been fully configured to include all Specifications related to the Interface. As each Interface is completed, the County will test the Interface and identify defects and Omissions. Contractor will: • Provide ad hoc telephone, email, and in person support to the County testing teams; • Monitor progress of testing and provide County with advice to address issues arising such as inability to meet timelines, lack of quality or attention in testing, the need for	**Deliverable 4.1 Tested Interfaces** • Interface Release Schedule. • Interfaces built which conform to the functional and technical Interface Specifications Document. • Documented results with County input and participation of each completed and tested Interface. • List of resolved Defects, including date of completion, retest results, and County Approval for each Interface. • County-Approved completed Unit Testing and System Testing for each Interface. **Acceptance Criteria:** • County Approved Interface Release Schedule. • County Approved built and tested Interfaces. • Resolution of all outstanding defects defined as required for Acceptance of each Interface. • Interface build completion document provided by Contractor is Approved by County • Gateway criteria have either been achieved or exceptions documented and Approved by Project governance. • All defects and change requests that remain for each Interface, but are not essential to Integration Testing, but essential to system Go-Live, are identified on the issues list by mutual agreement, and documented severity levels identified.

Task 4 Build and Test Interfaces	

additional resources or test support, and management tools, etc.;
• Provide a structured tool and format in MethodM Online for County to record and report defects and Omissions;
• Enter those defects and Omissions which are not entered directly by County personnel but which are, instead, communicated by email to Contractor Test Lead for entering into MethodM Online;
• Correct Defects and update Release Schedule to notify County of the build in which defect resolutions will be released;
• Address identified Omissions as follows:
  ○ Document and verify the requirements to address the Omission in a consistent and structured format;
  ○ Address all Omissions which will have little or no impact on Project Schedule or risk and update the Release Schedule to notify County when the new content or functionality will be released;
  ○ Escalate all Omissions which will have impact on Project Schedule or risk for consideration by the governance process;
  ○ Contractor and County will jointly determine whether a requested change should be pursued at this stage in the Project, pursued as a change request after Go-Live, or should be rejected;
  ○ Address all Omissions which are approved by the governance body and update the Release Schedule to notify County when the new content or functionality will be released; and
  ○ Provide test scripts with County input and participation to validate release of new functionality which addresses County Approved Omissions.
• Provide County with sample gateway criteria and assist County in adopting gateway criteria for moving from Unit and System Testing to Integration Testing; and	

Task 4 Build and Test Interfaces	

• Document County Approved gateway criteria.
For each Interface, Contractor will:
• Track progress on Deliverables and report progress as well as issues and risks in the weekly Project Status Reports;
• Update and maintain a Risk Matrix related to the completion of Interfaces Specifications and alert County of any risks to schedule;
• Provide build Documentation and descriptions for successful ongoing maintenance and support of Contractor provided Interfaces including:
  ○ Identification of all systems which utilize the Interface;
  ○ Functionality of the Interface, the hardware and software components, transactions involved, and security and integrity requirements; and
  ○ Interface requirements including data protocols, data formats, communications methods, and processing priorities.
• Configure, code, and test all applications, application extensions, and data acquisition/Interfaces in accordance with the functional and technical Interface Specifications Document;
• Execute the Interface Test Plan, including Unit Testing, and Integration Testing;
• Utilize test scripts to test each Interface;
• Test the Interfaces;
• Log issues and defects related to testing of Interfaces;
• Resolve issues and defects;
• Provide updates on status of defect resolution and implementation of County Approved change requests on weekly calls;
• Release defect resolutions and implemented change requests as part of the build release cycles;	

Task 4 Build and Test Interfaces	

• Support County in re-testing resolved defects deployed by Contractor;
• Jointly decide with County through the governance process when the Interface build is ready for moving to Integration Testing, based on:
  ○ Completeness of functionality and content; and
  ○ Severity of outstanding defects.
 	
Contractor will coordinate Interface build and testing with activities set forth in Exhibit A.21 (EHR System Testing Statement of Work) and the deployment readiness assessment.
 	
Contractor will notify County once each Interface build as documented in the Interfaces Specifications is complete.	

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.21 (EHR System Testing Statement of Work)

to the

Electronic Health Records System and Services Agreement

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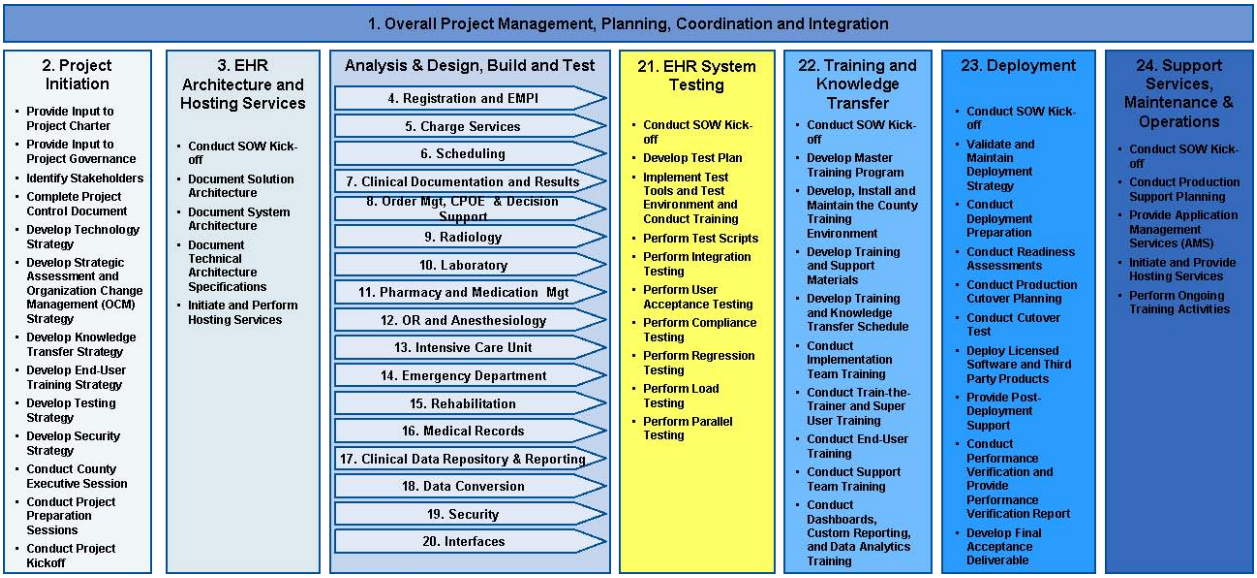
1. Introduction

This Exhibit A.21 (EHR System Testing Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the all the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.21 (EHR System Testing Statement of Work). The completion of any phase in a period of time shorter or longer that that specified below shall not increase the Contract Sum.

This is Exhibit A.21 (EHR System Testing Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide the framework which will be used in connection with testing for the EHR System.

3. SOW Summary

This SOW describes the EHR System Testing tasks, subtasks, and Deliverables required for successful completion of the Project. It describes the work plan and initiation session for this sub-project; development of a testing plan to ensure all components of the EHR System function when integrated; implementation of testing tools and a testing environment; development of test scripts and test scenarios; and performance of the integration testing, user acceptance testing, compliance testing, regression testing, load testing, and parallel testing.

3.1 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded Contractor resource staffing commitments and to detail specific County resources to guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.2 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) provides the test environment that is required for this SOW.
- Solution requirements identified and configured in Exhibits A.4 through A.18 are comprehensively tested as part of this SOW.
- Solution requirements identified and configured in Exhibits A.18 through A.20 (are comprehensively tested as part of this SOW.

3.3 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.4 Schedule

The commencement Date for this Exhibit A.21 (EHR System Testing Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation) and will run through completion of the Project. The Services under this SOW are scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.21 (EHR System Testing Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including Key Milestones, will be developed as part of Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed in writing by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of Deliverables and intellectual capital from previous client experiences.

(4) Cerner will provide all Services in English.

4.1 Cerner Delivery Leader Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor EHR System Testing Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service Interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County EHR System Testing SOW Lead**" or "**County SOW Lead**". The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor's Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Sub-Project Work Plan for EHR System Testing	Deliverable 1.1 Sub-Project Work Plan for EHR System Testing
Subtask 1.2 Conduct Initiation Session for EHR System Testing Workgroup	Deliverable 1.2 EHR System Testing Initiation Session
Task 2 Develop Test Plan	
Subtask 2.1 Develop Test Plan	Deliverable 2.1 Test Plan
Task 3 Implement Test Tools and Test Environment and Conduct Training	
Subtask 3.1 Implement Test Tools and Test Environment, and Conduct Training	Deliverable 3.1 Test Tools, Test Environment Implemented, and Training
Task 4 Develop Test Scripts	
Subtask 4.1 Develop Test Scripts, Test Scenarios, Test Cycles, and Common Test Data	Deliverable 6.1 Test Scripts, Test Scenarios, Test Cycles, and Common Test Data

Task/Subtask Name	Deliverables
Task 5 Perform Integration Testing	
Subtask 5.1 Identify Integration Test Scripts, Test Scenarios, Test Cycles and Common Test Data	Deliverable 5.1 Integration Test Scripts, Test Scenarios, Test Cycles and Common Test Data
Subtask 5.2 Perform Integration Testing	Deliverable 5.2 Integration Testing
Task 6 Perform User Acceptance Testing	
Subtask 6.1 Identify User Acceptance Test Scripts, Test Scenarios, Test Cycles, and Common Test Data	Deliverable 6.1 User Acceptance Test Scripts, Test Scenarios, Test Cycles, and Common Test Data
Subtask 6.2 Perform User Acceptance Testing	Deliverable 6.2 User Acceptance Testing
Task 7 Perform Compliance Testing	
Subtask 7.1 Perform Compliance Testing	Deliverable 7.1 Compliance Review
Task 8 Perform Regression Testing	
Subtask 8.1 Identify Regression Test Scripts, Test Scenarios, Test Cycles and, Common Test Data	Deliverable 8.1 Regression Test Scripts, Test Scenarios, Test Cycles, and Common Test Data
Subtask 8.2 Support Regression Testing	Deliverable 8.2 Regression Testing
Task 9 Perform Load Testing	
Subtask 9.1 Identify Load Test Scripts, Test Scenarios, Test Cycles, and Common Test Data	Deliverable 9.1 Load Test Scripts, Test Scenarios, Test Cycles, and Common Test Data
Subtask 9.2 Support Load Testing	Deliverable 9.2 Load Testing
Task 10 Perform Parallel Testing	
Subtask 10.1 Identify Parallel Test Scripts, Test Scenarios, Test Cycles, and Common Test Data	Deliverable 10.1 Parallel Test Scripts, Test Scenarios, Test Cycles, and Common Test Data
Subtask 10.2 Support Parallel Testing	Deliverable 10.2 Parallel Testing (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable will be developed in accordance with the following Contractor's obligations, which will be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by the County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and, distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and analyze County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee will notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, the Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable will be provided to County with a request for Acceptance. County will notify Contractor of its Acceptance or rejection in a time that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. EHR System Testing specific training on the Licensed Software will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County EHR System Testing Workgroup**" or "**County** Workgroup and the County EHR System Testing Workgroup will be introduced to various Contractor tools, methodologies and Best Practices that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;

Task 1 Conduct SOW Kick-off	
○ Contractor Clinical Strategist; ○ Contractor Solution Architects; ○ Contractor Delivery Consultants; ○ Contractor Interface Architect; and ○ Contractor Quality Center Architect. • County Key Employees ○ County Project Director; ○ County Project Manager; ○ County SOW Leads; ○ County Interface Manager; ○ County Third-Party Representatives (Quadramed Affinity Financials, Fuji PACS etc.); and ○ Testing Coordinator.	
Subtasks/Deliverables	
Subtask 1.1 Develop Sub-Project Work Plan for EHR System Testing As part of the Project Initiation, Contractor will develop an overall Project Work Plan. The Project Work Plan will include an EHR System Testing-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the EHR System Testing-specific section of the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.21 (EHR System Testing Statement of Work) and subject to County Approval.	**Deliverable 1.1 Sub-Project Work Plan for EHR System Testing** • EHR System Testing-specific section of Project Work Plan. **Acceptance Criteria:** • The EHR System Testing-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The EHR System Testing-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Sub-Project Work Plan for EHR System Testing). • The EHR System Testing-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the EHR System Testing-specific section of the Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of the EHR System Testing-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Plan for interacting with other SOW teams to ensure training is considered in those SOWs and relevant materials are developed.

Task 1 Conduct SOW Kick-off	
	• Confirmed availability of Contractor resources required to implement the EHR System Testing sub-Project Work Plan.

Subtask 1.2 Conduct Initiation Session for EHR System Testing Workgroup
Contractor will conduct an initiation session to provide and introduction to the County Workgroup to the Services covered by this Exhibit A.21 (EHR System Testing Statement of Work), including the timelines and nature of the work effort that will be required to implement this SOW.
Before the Initiation Session, Contractor will:
• Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW.
• Provide County with a roster of EHR System Testing Initiation Session participants.
• Conduct a Project Management Workshop.
• Develop an agenda/schedule for the EHR System Testing Initiation Session.
Contractor will conduct the EHR System Testing Initiation Session as follows:
• Review and document Licensed Software and Third-Party-Products, Domains, Venues and Locations for which EHR System Testing must be completed.
• Provide background and overview of EHR System Testing, including challenges and success criteria.
• Review tasks, Deliverables and Milestones for the development of EHR System Testing.
• Illustrate and document dependencies between this SOW and any other SOWs and Project work streams, including at a minimum:
  ○ Requirements gathering and functional/technical specifications during System Review, Design Review and System Validation; and
  ○ Go-Live readiness assessment.
• Review and develop plans to address
	Deliverable 1.2 EHR System Testing Initiation Session
	• EHR System Testing Initiation Session materials for County review one (1) week prior to Initiation Session.
	• List of Licensed Software Modules and Third-Party Products for which testing must be conducted.
	• Report documenting EHR System Testing SOW dependencies
	• List of County Workgroup members who attended the EHR System Testing Initiation Session.
	• List of assignments and roles associated with those assignments for members of County Workgroup.
	• Initiation Session Event Summary Report.
	• Agenda/schedule for EHR System Testing Initiation Session.
	• Attendance sheet/roster of participants for EHR System Testing Initiation Session.
	• EHR System Testing Initiation Session presentation materials.
	
	Acceptance Criteria:
	• The Initiation Session Event Summary Report from Contractor documenting that the EHR System Testing Initiation Session (a) has been completed and (b) includes accurate documentation of the content, outcomes and next steps agreed upon at the EHR System Testing Initiation Session Event.
	• The EHR System Testing Initiation Session Event Summary Report has been Approved by County.
	• Report documenting EHR System Testing SOW dependencies addresses all elements

Task 1 Conduct SOW Kick-off	
dependencies of training and knowledge transfer with other SOWs and Project work streams. After the Initiation Session, Contractor will prepare an Initiation Session Event Summary Report for review and Approval by County.	described in subtask 1.2 (Conduct Initiation Session for EHR System Testing Workgroup). • Report documenting EHR System Testing SOW dependencies has been Approved by County.

Task 2 Develop Test Plan	
Task Description	
Contractor will develop a comprehensive Test Plan with input and participation from County covering all testing necessary to confirm that the Licensed Software, Third-Party Products, Modules and all components of the EHR System, including Hardware, Interfaces and peripheral devices, function in an integrated fashion in accordance with the Specifications and County Business Objectives. The objectives and coverage of the Test Plan will be consistent with the testing strategy developed for subtask 9.1 (Develop Testing Strategy) of Exhibit A.2 (Project Initiation) and the work detailed in this SOW and the Deployment Strategy in Exhibit A.23 (Deployment).	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architects;
  ○ Contractor Delivery Consultants;
  ○ Contractor Interface Architect; and
  ○ Contractor Quality Center Architect.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Leads;
  ○ County Interface Manager;
  ○ County Third-Party Representatives (Quadramed Affinity Financials, Fuji PACS etc.); and
  ○ Testing Coordinator.	

Subtasks/Deliverables	
Subtask 2.1 Develop Test Plan Contractor will develop a Test Plan document with input and participation from County that identifies all major aspects and phases of testing throughout the Project, including a test plan for each Cluster deployment that specifically addresses testing at each facility where applicable. The Test Plan will detail Contractor's approach to performing and/or	**Deliverable 2.1 Test Plan** • Draft Test Plan. • Final Test Plan incorporating County feedback. • Updated Test Plan.

Task 2 Develop Test Plan	
supporting the following testing phases: • Unit Testing (completed as part of Exhibits A.4 – A.17); • System Testing (completed as part of Exhibits A.4 – A.17); • Interface Testing in accordance with subtask 4.1 (Build and Test Interfaces) of Exhibit A.20 (Interface); • Regression Testing; • Integration Testing; • User Acceptance Testing; • Failover testing in accordance with the processes and timelines developed in task 5 (Initiate and Perform Remote Hosting Services) of Exhibit A.3 (EHR Architecture and Hosting Services) and task 4 (Conduct Solution Readiness Assessment) of Exhibit A.23 (Deployment); • Load Testing (i.e., stress and volume testing); • Compliance Testing; and • Parallel Testing. The Test Plan will include a test approach for each testing phase and facility. The test approach will include: • Test overview including objectives and coverage; • Testing control; • Resourcing, including staffing (i.e., test user roles), infrastructure and communication protocols; • Contractor and third-party vendor roles and responsibilities; • How County will participate in the testing; • Test schedule with key dates and Deliverables; • Identification of recommended prerequisites to beginning each testing phase; • Testing sequence and interdependencies between testing phases; • Testing metrics (expected outcomes, including reports);	**Acceptance Criteria:** • Final Test Plan incorporates, and is consistent with, County feedback. • Final Test Plan addresses all elements required in subtask 2.1 (Develop Test Plan). • Final Test Plan is delivered in accordance with the Agreement, Specifications and agreed delivery date, and has been Approved by County.

Task 2 Develop Test Plan	

• Configuration management;
• Change control;
• Test environments;
• Tester training;
• Exit criteria;
• Required artifacts that cover all Domains, Venues and Locations, including:
  ○ Test scenarios (narrative);
  ○ Test scripts (step-by-step); and
  ○ Test data.
• Requirements for resetting test environment and test data to County-defined save point;
• Defect severity definitions;
• Communication procedures for defect identification, resolution, retesting and escalation;
• Test tools, both Contractor provided and County owned;
• Test cycle control sheets; and
• Assumptions, issues and risks.
Contractor will develop a draft Test Plan and submit it to County for review and feedback.
Contractor will review and incorporate County feedback and proposed changes into the Test Plan and submit a final versions County for Approval.
Throughout the Project, Contractor will review and update the Test Plan as required by County to increase testing effectiveness and efficiency and resolve testing problems, but at a minimum Contractor will review and update the Test Plan prior to each Cluster deployment.
Contractor will submit Test Plan updates to County for review and Approval.	

Task 3 Implement Test Tools and Test Environment and Conduct Training
Task Description
Contractor will implement the testing tools and required environments to conduct testing in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan).

Task 3 Implement Test Tools and Test Environment and Conduct Training	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Architect;
  ○ Contractor EHR System Testing Delivery Consultant;
  ○ Contractor Clinical Strategist;
  ○ Contractor Interface Architect;
  ○ Contractor Quality Center Architect;
  ○ Contractor Technical Engagement Leader;
  ○ Contractor Hosting Services Technical Engagement Leader; and
  ○ Contractor Hosting Services System Engineer.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Leads;
  ○ County Interface Manager;
  ○ County Third-Party Representatives (Quadramed Affinity Financials, Fuji PACS etc.);
  ○ County Testing Coordinator;
  ○ County Technical Manager; and
  ○ County SMEs.	

Subtasks/Deliverables	
Subtask 3.1 Implement Test Tools and Test Environments and Conduct Training For each type of testing, Contractor will: • Identify testing tools to be used; • Identify test environments; • Identify and coordinate data transmission between County system and third-party system vendor Interfaces; • In instances where no third-party system vendor test data can be obtained, assist County in developing proxy data for testing Interfaces; • Provision test users in test environment; • Implement and provide County with access to the Contractor-owned test tools; • Implement and provide County with access to the test environments in accordance with the test plan and tasks and deliverables in Exhibit A.3 (EHR Architecture and Remote Hosting	**Deliverable 3.1 Test Tools, Test Environments and Training** • List of Contractor test tools. • List of additional recommended test tools. • Contractor validation that test tools and test environments have been implemented. • County access to test tools and test environments. • Documented County readiness for testing including staff readiness (training complete). **Acceptance Criteria:** • County Approved test tools and test environment.

Task 3 Implement Test Tools and Test Environment and Conduct Training	
Services); • Recommend testing tools for County in areas where Contractor does not own tools; • Assist County in selecting third-party system vendor test tools identified by County; and • Load bulk test data into test environment, where applicable. Contractor will train users on use of Contractor-owned test tools.	

Task 4 Develop Test Scripts	
Task Description	
Contractor will provide Services with County input and participation to develop test scripts, test scenarios, test cycles, common test data, associated test conditions, and expected results for all testing phases. Test scripts and test scenarios will take into account departmental workflows, County provided policies and procedures, County provided actual patient scenarios and cross-departmental processes and activities across all Domains, Venues, and Locations.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Integration Architect;
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Quality Center Delivery Consultants;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect; and
  ○ Contractor SOW's Delivery Consultants.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Testing Coordinator;
  ○ County SOW Leads; and
  ○ County SMEs.	

Subtasks/Deliverables	
Subtask 4.1 Develop Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will provide Services with County input and participation to develop test scripts, test scenarios, test cycles, common test data, associated test conditions, and expected results. Test scripts and test scenarios will take into account departmental workflows, County provided	**Deliverable 4.1 Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • Sample test scripts • Review and validation of final test scripts. • Final test cycle control sheets. • Final issue tracking form. • Test script catalog.

Task 4 Develop Test Scripts	
policies and procedures, County provided actual patient scenarios, and cross-departmental processes, and activities across all Domains, Venues and Locations. Contractor will: • Provide County with samples of test scripts and test scenarios; • Work with County to identify and document relevant test scenarios; • Work with County to identify and document relevant patient data; • Document test scenarios and test patient data requirements; • Support County in developing detailed test scripts built upon Contractor provided samples; • Review and test County adapted test scripts and recommend revisions to ensure scripts are comprehensive and effective to test all Licensed Software and Third-Party Product content and functionality; • Support County in the development of common test data and specify volume of data required to perform thorough testing; • Monitor progress on test script and common test data development; • Validate completeness of test scripts and common test data, to ensure that test scripts and test scenarios take into account departmental workflows, County provided policies and procedures, County provided actual patient scenarios, and cross-departmental processes and activities across all Domains, Venues and Locations; • Notify County of any risks to schedule or quality and completeness of the test scripts and common test data being developed; • Identify systemic issues related to completion of test scripts or test data (e.g., time management, complexity, data quality, training issues) and provide County with recommendation for addressing them (e.g.,	**Acceptance Criteria:** • Test scripts and test scenarios completed. • County verification that common test data required to complete all test scripts has been identified and developed. • County Approved test cycle control sheets. • County Approved test script catalog.

Task 4 Develop Test Scripts	
through additional training, augmenting resources). • Provide additional resources to the address issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation). • Provide recommendations on grouping test scenarios and conditions into test cycles to maximize efficient test execution; • Develop issue tracking form; • Develop test cycle control sheet detailing when and by whom test cycles will be executed and submit it to County for feedback; • Archive test scripts after all testing phases are completed; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on test scripts and common test data development to County personnel as needed. Contractor will develop a catalog of test scripts for the purpose of regression testing which documents interdependencies, including for each test script: • Test description; • Applicable Modules; and • Applicable Domains, Venues and Locations. Contractor will develop a draft test script catalog and submit it to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the test script catalog and submit a final version to County for Approval. Contractor will maintain and, if applicable, continuously update the test script catalog with all test scripts that are developed for task 5 (Perform Integration Testing), task 6 (User Acceptance Testing), task 8 (Perform Regression Testing), task 9 (Perform Load Testing), task 10 (Perform Parallel	

Task 4 Develop Test Scripts	
Testing), or other testing required by this or any other SOW.	

Task 5 Perform Integration Testing	
Task Description	
Contractor will monitor the progress, and validate completion, of all prerequisites to Integration Testing identified in the Test Plan. Contractor will assist County in performing Integration Testing in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure that information is properly shared across the Licensed Software, Third-Party Products, County systems and third-party vendor systems. The Integration Testing will include peripheral device testing to ensure that all peripheral devices, medical devices, portable devices and other County hardware deliver the appropriate functionality in accordance with the Specifications.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Contractor Interface Architect;
  ○ Contractor Hosting Services Technical Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ Third-Party System County Analyst and, if needed, Third-Party System Vendor Analyst;
  ○ County Network Technician; and
  ○ County Testing Coordinator.	

Subtasks/Deliverables	
Subtask 5.1 Identify Integration Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will: • Assist County in identifying appropriate Integration Test scripts from the test scripts developed in subtask 4.1 (Develop Test Scripts, Test Scenarios, Test Cycles, and Common Test Data) and developing any further test scripts	**Deliverable 5.1 Integration Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • Integration Test scripts. • Test cycle control sheet. • Common test data loaded into test environment database.

Task 5 Perform Integration Testing	
that may be required to complete Integration Testing. • Assess selected test scripts for completeness and accuracy related to Integration Testing and document gaps; • Identify additional test scenarios, test scripts and test data to address gaps; • Assist County in developing additional tests scripts for Integration Testing; • Develop draft test cycle control sheet detailing when and by whom test cycles will be executed and submit it to County for feedback; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on Integration Test script and test data development to County personnel as needed.	**Acceptance Criteria:** • County Approved test scripts and test scenarios. • County verification that common test data required to complete all test scripts has been identified, developed and loaded. • County Approved test cycle control sheets.
Subtask 5.2 Perform Integration Testing Contractor will assist County in conducting implementation testing, record progress, and validate completion, of all prerequisites to Integration Testing identified in the Test Plan. Contractor will: • Monitor the progress of all prerequisites to Integration Testing identified in the Test Plan; • Notify County of any issues, problems or incidents affecting the completion of any prerequisites to Integration Testing in accordance with the timeline identified in the Test Plan; • Validate the completion of all Integration Testing prerequisites identified in the Test Plan; and • Notify County when all prerequisites to Integration Testing identified in the Test Plan have been completed. Contractor will perform Integration Testing in accordance with the Test Plan and assist County in performing Integration Testing activities. Contractor will: • Use the test scripts selected and developed in	**Deliverable 5.2 Completed Integration Testing** • Integration Testing prerequisites identified in the Test Plan complete. • Contractor internal integration testing complete. • Integration Testing complete. • Test documentation including complete Error and defect log with documented resolution. **Acceptance Criteria:** • Contractor validated completion of all prerequisites to Integration Testing identified in the Test Plan. • Contractor validated completion of Integration Testing. • County Approved test documentation.

Task 5 Perform Integration Testing	
subtask 5.1 (Identify Integration Test Scripts, Test Scenarios, Test Cycles, and Common Test Data) to conduct Contractor internal Integration Testing prior to County's Integration Testing; • Provide on-site support during County Integration Testing activities in accordance with Test Plan and test scripts; • Load and configure Licensed Software and Third-Party Products and system reference tables; • County will load and configure physical adapters (if any) for all peripheral devices, medical devices, portable devices and other County hardware; • Review County log of Errors and defects; • Resolve all Errors and defects impacting Go-Live and support County personnel in trouble shooting issues; • Assist County with re-testing defect fixes; • Regularly communicate with County regarding status and schedule of Integration Testing; and • Document test results. Contractor will monitor status and schedule of integration testing and support re-testing resolved defects. Contractor will conduct daily wrap up sessions that include: • Integration Testing progress update; • Review of open issues; and • Strategy and schedule for resolution of defects.	

Task 6 Perform User Acceptance Testing
Task Description
Contractor will provide Services in connection with additional User Acceptance Testing activities in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure that the Licensed Software and Third-Party Products function in accordance with the Specifications and support County's Business Objectives as set forth in Recital D of the Agreement and in Exhibit H (EHR Program Strategy) of the Agreement.

Task 6 Perform User Acceptance Testing	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Contractor Interface Architect;
  ○ Contractor Hosting Services Technical Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ Third-Party System County Analyst and, if needed, Third-Party System Vendor Analyst;
  ○ County Network Technician;
  ○ County Testing Coordinator; and
  ○ Super Users, as determined by County.	

Subtasks/Deliverables	
Subtask 6.1 Identify User Acceptance Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will: • Assist County in identifying appropriate User acceptance test scripts from the test scripts developed in subtask 4.1 (Develop Test Scripts, Test Scenarios, Test Cycles, and Common Test Data) and, if required, developing any further test scripts that may be required to complete User Acceptance Testing; • Assess selected test scripts for completeness and accuracy related to User Acceptance Testing and document gaps; • Identify additional test scenarios, test scripts and test data to address gaps; • Assist County in developing additional tests scripts for User Acceptance Testing; • Develop draft test cycle control sheet detailing when and by whom test cycles will be	**Deliverable 6.1 User Acceptance Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • User Acceptance Test scripts. • Test cycle control sheet. • Common test data loaded into test environment database. **Acceptance Criteria:** • County Approved test scripts and test scenarios. • County verification that common test data required to complete all test scripts has been identified, developed and loaded. • County Approved test cycle control sheets.

Task 6 Perform User Acceptance Testing	
executed and submit it to County for feedback; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on User Acceptance Test script and common test data development to County personnel as needed.	

Subtask 6.2 Perform User Acceptance Testing
Contractor will provide Services to assist County in performing User Acceptance Testing activities. Contractor Services include:
• Use the test scripts selected and developed in subtask 6.1 (Identify User Acceptance Test Scripts, Test Scenarios, Test Cycles and Common Test Data) to conduct Contractor internal User Acceptance Testing prior to County's User Acceptance Testing;
• Provide on-site support during County with User Acceptance Testing activities in accordance with test plan and test scripts;
• Review County log of Errors and defects;
• Resolve all Errors and defects and support County personnel in trouble shooting issues, as applicable;
• Assist County with re-testing defect fixes;
• Regularly communicate with County regarding status and schedule of User Acceptance Testing; and
• Document test results.
Contractor will monitor status and schedule of User Acceptance Testing and support re-testing resolved defects. Contractor will conduct daily wrap up sessions that include:
  ○ User Acceptance Testing progress update;
  ○ Review of open issues; and
  ○ Strategy and schedule for resolution of defects.
	Deliverable 6.2 User Acceptance Testing
	• Contractor internal User Acceptance Testing complete.
	• User Acceptance Testing complete.
	• Test documentation including complete Error and defect log with documented resolution.
	
	Acceptance Criteria:
	• Contractor validated completion of User Acceptance Testing.
	• County Approved test documentation.

Task 7 Perform Compliance Testing	
Task Description	
Contractor will conduct Compliance Testing throughout the term of the Agreement in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure the Licensed Software, Third-Party Products and other EHR System components comply with legal and regulatory requirements in accordance with the Agreement. County will participate with Contractor in completing the compliance testing.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Meaningful Use Analysts;
  ○ Contractor Hosting Services Engagement Leader; and
  ○ Contractor Technical Engagement Leader.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ County EHR System Testing Coordinator; and
  ○ Compliance Department Representatives.	

Subtasks/ Deliverables	
Subtask 7.1 Perform Compliance Testing Throughout the design, build and test process, Contractor will conduct Compliance Testing that includes an assessment of how Licensed Software, Third-Party Products and other EHR System components meet the Legal Requirements and other regulatory requirements identified in the Agreement, including: • Federal mandated requirements (e.g., HIPAA/HITECH); • County provided State, County and payor mandated requirements; • Domain specific compliance and certification review (e.g., College of American Pathologists and American College of Radiologists); • Meaningful Use requirements, including those set forth in Exhibit V (Meaningful Use); • Contractor Hosting Services security policies;	**Deliverable 7.1 Compliance Review** • Completed Compliance Testing. • Draft compliance and certification review. • Final compliance and certification review. • Updated compliance and certification review. **Acceptance Criteria:** • EHR System compliance. • County-Approved compliance and certification review.

Task 7 Perform Compliance Testing	
and • Information protection requirements specified in Section 20 of the Agreement and Exhibit K (Information Protection Requirements) to the Agreement. Based upon the outcome of the Compliance Testing, Contractor will develop a draft compliance and certification review which identifies compliance and certification gaps and provides remediation recommendations and submit it to County for review and feedback. Contractor will review and incorporate County feedback and proposed changes into the compliance and certification review and submit a final version to County for Approval. Contractor will monitor changes to the Federal regulatory environment and Contractor and County will conduct compliance and certification testing activities to ensure Licensed Software and Third-Party Products continued compliance with Legal Requirements and other Federal regulatory requirements identified in the Agreement and this SOW. Contractor will: • Conduct additional compliance and certification testing as necessary with County participation to address new regulatory developments, during implementation phase. • Modify test scripts as necessary to address new regulatory developments to test continued compliance; • Update compliance and certification review document as necessary to address new regulatory requirements • Address compliance and certification gaps identified in updated compliance and certification reviews.	

Task 8 Perform Regression Testing	
Task Description	
Contractor will support County Regression Testing activities in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure that changes to the Licensed Software do not introduce defects.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Contractor Interface Architect;
  ○ Contractor Hosting Services Technical Engagement Leader;
  ○ Contractor Hosting Services System Engineer;
  ○ Contractor Technical Engagement Leader;
  ○ Contractor AMS Project Manager; and
  ○ Contractor AMS Delivery Consultants.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ Third-Party System County Analyst and, if needed, Third-Party System Vendor Analyst;
  ○ County Network Technician;
  ○ County Testing Coordinator; and
  ○ County Super Users, as determined by County.	

Subtasks/Deliverables	
Subtask 8.1 Select Regression Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will perform and assist County in performing Regression Testing activities at a minimum when: • New domains are created; • Existing domains are refreshed; • Code is loaded into a domain; • A configuration change occurs; • Hardware and operating system changes occur; and • Data conversion occurs.	**Deliverable 8.1 Regression Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • Regression Test scripts. • Test cycle control sheet. • Common test data loaded into test environment database. **Acceptance Criteria:** • County Approved test scripts and test scenarios. • County verification that common test data required to complete all test scripts has

Task 8 Perform Regression Testing	
Contractor will: • Assist County in identifying appropriate regression test scripts from the test scripts developed in subtask 4.1 (Develop Test Scripts, Test Scenarios, Test Cycles and Common Test Data) and subtask 5.1 (Identify Integration Test Scripts, Test Scenarios, Test Cycles and Common Test Data) and in developing any further test scripts that may be required for Regression Testing; • Assess selected test scripts for completeness and accuracy related to Regression Testing and document gaps; • Identify additional test scenarios, test scripts and test data to address gaps; • Assist County in developing additional tests scripts for Regression Testing; • Develop draft test cycle control sheet detailing when and by whom test cycles will be executed and submit it to County for feedback; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on Regression Test script and common test data development to County personnel as needed.	been identified, developed, and loaded. • County Approved test cycle control sheets.
Subtask 8.2 Perform Regression Testing Contractor will provide Services to assist County in performing Regression Testing activities. Contractor Services will include: • Provide support during County Regression Testing activities in accordance with Test Plan and test scripts; • Review County log of Errors and defects; • Resolve all Errors and defects and support County personnel in trouble shooting issues, as applicable; • Assist County with re-testing defect fixes; • Regularly communicate with County regarding status and schedule of regression testing; and • Document test results.	**Deliverable 8.2 Completed Regression Testing** • Regression Testing complete. • Test documentation including complete Error and defect log with documented resolution and Regression Testing Summary Reports. **Acceptance Criteria:** • Contractor validated completion of regression testing and resolution of all Errors and defects. • County Approved test documentation.

Task 8 Perform Regression Testing	
Contractor will monitor status and schedule of Regression Testing and support re-testing resolved Defects. Contractor will Regression Testing Summary Reports that include: • Regression testing progress update; • Review of open issues; and • Strategy and schedule for resolution of Defects.	

Task 9 Perform Load Testing
Task Description
Contractor will support County Load Testing activities (i.e., stress and volume testing) in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure the Licensed Software and Hosting Services perform in accordance with the Specifications and Service Levels during times of high system demand.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Contractor Interface Architect;
  ○ Contractor Hosting Services Technical Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ Third-Party System County Analyst and, if needed, Third-Party System Vendor Analyst;
  ○ County Network Technician;
  ○ County Testing Coordinator; and
  ○ Super Users, as determined by County to be necessary to perform Load Testing.

Task 9 Perform Load Testing	
Subtasks/Deliverables	
Subtask 9.1 Identify Load Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will: • Assist County in identifying appropriate Load Test scripts from the test scripts developed in subtask 4.1 (Develop Test Scripts, Test Scenarios, Test Cycles and Common Test Data) and in developing any further test scripts that may be required for Load Testing; • Assess selected test scripts for completeness and accuracy related to Load Testing and document gaps; • Identify additional test scenarios, test scripts and test data to address gaps; • Assist County in developing additional tests scripts for Load Testing; • Develop draft test cycle control sheet detailing when and by whom test cycles will be executed and submit it to County for feedback; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on Load Test script and common test data development to County personnel as needed.	**Deliverable 9.1 Load Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • Load Test scripts. • Test cycle control sheet. • Common test data loaded into test environment database. **Acceptance Criteria:** • County Approved test scripts and test scenarios. • County verification that common test data required to complete all test scripts has been identified, developed and loaded. • County Approved test cycle control sheets.
Subtask 9.2 Perform Load Testing Contractor will provide Services to assist County in performing Load Testing activities. Contractor Services will include: • Provide on-site support during County Load Testing activities in accordance with test plan and test scripts; • Review County log of Errors and defects; • Resolve all Errors and Defects and support County personnel in trouble shooting issues, as applicable; • Develop and implement plans to resolve performance and other technical issues identified as a result of the Load Testing • Assist County with re-testing defect fixes	**Deliverable 9.2 Completed Load Testing** • Load Testing complete. • Test documentation including complete Error and Defect log with documented resolution. • Corrected performance or technical issues arising from Load Testing. **Acceptance Criteria:** • Contractor validated completion of Load Testing and resolution of all Errors, defects, and performance and other technical issues identified. • County Approved test documentation.

Task 9 Perform Load Testing	

• Regularly communicate with County regarding status and schedule of Load Testing; and
• Document test results.
 	
Contractor will monitor status and schedule of Load Testing and support re-testing resolved Defects. Contractor will conduct daily wrap up sessions that include:
  ○ Load Testing progress update;
  ○ Review of open issues; and
  ○ Strategy and schedule for resolution of defects.	

Task 10 Perform Parallel Testing
Task Description
Contractor will support County Parallel Testing activities in accordance with the Test Plan developed in subtask 2.1 (Develop Test Plan) to ensure that changes to the Licensed Software do not produce outcomes that produce different than expected business results compared to the current environment.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Clinical Strategist;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Delivery Consultants;
  ○ Contractor Interface Architect;
  ○ Contractor Hosting Services Technical Engagement Leader;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Technical Engagement Leader.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County SOW Leads;
  ○ County SMEs;
  ○ Third-Party System County Analyst and, if needed, Third-Party System Vendor Analyst;
  ○ County Network Technician;
  ○ County Testing Coordinator; and
  ○ Super Users, as determined by County.

Task 10 Perform Parallel Testing	
Subtasks/Deliverables	
Subtask 10.1 Select Parallel Test Scripts, Test Scenarios, Test Cycles, and Common Test Data Contractor will: • Assist County in identifying appropriate Parallel Test scripts for the Licensed Software from the test scripts developed in subtask 4.1 (Develop Test Scripts, Test Scenarios, Test Cycles and Common Test Data) and in developing any further test scripts for the Licensed Software necessary for Parallel Testing; • Assess selected test scripts for completeness and accuracy related to Parallel Testing and document gaps; • Identify additional test scenarios, test scripts and test data to address gaps; • Assist County in developing additional test scripts for the Licensed Software for Parallel Testing; • Develop draft test cycle control sheet detailing when and by whom test cycles will be executed and submit it to County for feedback; • Provide support by responding to all County ad hoc calls and emails in a timely manner to address questions as they arise; and • Deliver additional training on Parallel Test script and common test data development to County personnel as needed.	**Deliverable 10.1 Parallel Test Scripts, Test Scenarios, Test Cycles, and Common Test Data** • Parallel Test scripts. • Test cycle control sheet. • Common test data loaded into test environment database. **Acceptance Criteria:** • County Approved test scripts and test scenarios. • County verification that common test data required to complete all test scripts has been identified, developed and loaded. • County Approved test cycle control sheets.
Subtask 10.2 Perform Parallel Testing Contractor will provide Services to assist County in performing Parallel Testing activities for the Licensed Software. Contractor Services will include: • In conjunction with User Acceptance Testing, provide on-site support during County Parallel Testing activities in accordance with Test Plan and test scripts; • Review County log of Errors and defects; • Resolve all Errors and defects and support County personnel in trouble shooting issues, as	**Deliverable 10.2 Parallel Testing** • Parallel Testing complete. • Test documentation including complete Error and defect log with documented resolution. **Acceptance Criteria:** • Contractor validated completion of Parallel Testing and resolution of all Errors and defects. • County Approved test documentation.

Task 10 Perform Parallel Testing	
applicable; • Assist County with re-testing defect fixes • Regularly communicate with County regarding status and schedule of Parallel Testing; and • Document test results for the Licensed Software. Contractor will monitor status and schedule of Parallel Testing and support re-testing resolved Defects. Contractor will conduct daily wrap up sessions that include: • Parallel Testing progress update; • Review of open issues; and • Strategy and schedule for resolution of defects.	

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.22 (Training and Knowledge Transfer Statement of Work)

to the

Electronic Health Records System and Services Agreement

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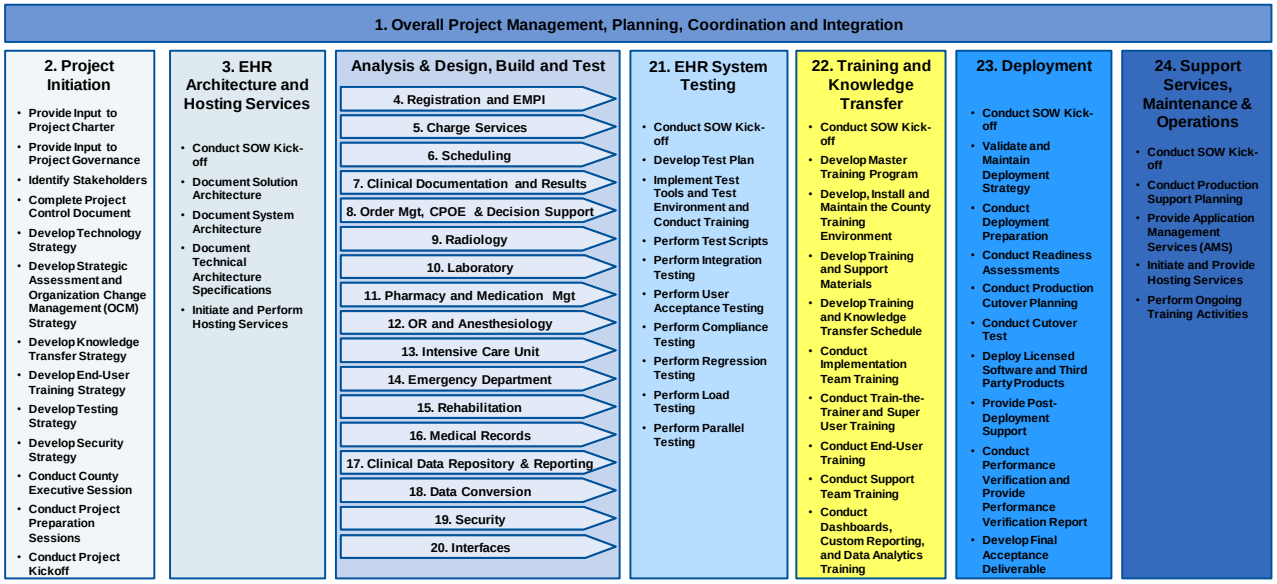
1. Introduction

This Exhibit A.22 (Training and Knowledge Transfer Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the all the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.22 (Training and Knowledge Transfer Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.22 (Training and Knowledge Transfer Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the EHR Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will provide the framework which will be used to perform training and knowledge transfer for this EHR System implementation.

3. SOW Summary

3.1 Overview

Completion of this SOW will provide (a) the designated Workgroup training and preparation in the fundamentals of the use of the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, (b) analysis of current state workflow, (c) recommendations from Contractor for the design, configuration, and testing approach, and (d) some implementation elements of the Licensed Software and Third-Party Products components which are necessary to deliver Training and Knowledge Transfer as part of the EHR System.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provide Deliverables which create the foundation for all SOWs, including this SOW.
- Deliverables from the domain specific analysis, design, and build SOWs (Exhibits A.4 – A.17) will provide information on the content and audience of the training to be delivered as part of this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved, and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined –Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – Executive leadership from Contractor, DHS, and the DHS CIO must be involved in the Project and meet at regular intervals to discuss the Project's progress and reach agreement on decisions that have been escalated to their level.

3.5 Schedule

The commencement date for Exhibit A.22 (Training and Knowledge Transfer Statement of Work) will be determined by the Project Work Plan developed as part of Exhibit A.2 (Project Initiation Statement of Work) and will continue throughout the duration of the Project. This SOW is scheduled to be completed upon completion of final Cluster deployment and upon Final Acceptance by the County Project Director of the Deliverables in this Exhibit A.22 (Training and Knowledge Transfer Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost-effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Training and Knowledge Transfer Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain a sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Training and Knowledge Transfer SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project status meetings with Contractor's Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Sub-Project Work Plan for Training and Knowledge Transfer	Deliverable 1.1 Sub-Project Work Plan for Training and Knowledge Transfer (Key Deliverable)
Subtask 1.2 Conduct Initiation Session for Training and Knowledge Transfer Workgroup	Deliverable 1.2 Training and Knowledge Transfer Initiation Session (Key Deliverable)
Task 2 Develop Master Training Program	
Subtask 2.1 Develop and Maintain Master Training Program	Deliverable 2.1 Master Training Program (Key Deliverable)

Task/Subtask Name	Deliverables
Subtask 2.2 Provide a Web Based Training Curriculum	Deliverable 2.2 Web Based Training Curriculum (Key Deliverable)
Subtask 2.3 Develop Instructor-Led Training Framework	Deliverable 2.3 Instructor-Led Training Curriculum and Framework (Key Deliverable)
Subtask 2.4 Develop Knowledge Transfer Plan	Deliverable 2.4 Knowledge Transfer Plan (Key Deliverable)
Subtask 2.5 Develop Training Development Standards	Deliverable 2.5 Training Development Standards (Key Deliverable)
Task 3 Develop, Install and Maintain the County Training Environment	
Subtask 3.1 Develop Plan for the Training Environment	Deliverable 3.1 Training Environment Plan (Key Deliverable)
Subtask 3.2 Install and Maintain the County Training Environment	Deliverable 3.2 Training Environments (Key Deliverable)
Task 4 Develop Training and Support Materials	
Subtask 4.1 Develop Training Materials	Deliverable 4.1 Training Materials (Key Deliverable)
Subtask 4.2 Implement and Deploy the LearningLIVE Environment	Deliverable 4.2 LearningLIVE Environment (Key Deliverable)
Task 5 Develop Training and Knowledge Transfer Schedule	
Subtask 5.1 Develop Training and Knowledge Transfer Schedule	Deliverable 5.1 Training and Knowledge Transfer Schedule (Key Deliverable)
Task 6 Conduct Implementation Team Training	
Subtask 6.1 Conduct Implementation Team Training	Deliverable 6.1 Implementation Team Training (Key Deliverable)
Task 7 Conduct Train-the-Trainer and Super User Training	
Subtask 7.1 Conduct Train-the-Trainer and Super User Training	Deliverable 7.1 Train-the-Trainer and Super User Training (Key Deliverable)
Task 8 Support End-User Training	
Subtask 8.1 Conduct End-User Training	Deliverable 8.1 End-User Training (Key Deliverable)
Subtask 8.2 Conduct End-User Survey and Develop End-User Training Effectiveness Reports	Deliverable 8.2 End-User Survey and End-User Training Effectiveness Reports (Key Deliverable)
Subtask 8.3 Post Go-Live Evaluation of Training Efficacy	Deliverable 8.3 Post Go-Live Training Efficacy Report (Key Deliverable)

Task/Subtask Name	Deliverables
Task 9 Conduct Support Team Training	
Subtask 9.1 Develop Help Desk Scripts	Deliverable 9.1 Help Desk Scripts (Key Deliverable)
Subtask 9.2 Conduct Support Training	Deliverable 9.2 Support Training (Key Deliverable)
Subtask 9.3 Conduct Coaching Sessions for County Personnel Responsible for Maintaining System	Deliverable 9.3 Coaching Sessions (Key Deliverable)
Task 10 Conduct Dashboards, Custom Reporting, and Data Analytics Training	
Subtask 10.1 Conduct Dashboards, Custom Reporting, and Data Analytics Training	Deliverable 10.1 Dashboards, Custom Reporting, and Data Analytics Training (Key Deliverable)
Subtask 10.2 Conduct Coaching Sessions for Data Analytics and Report Writing Team	Deliverable 10.2 Coaching Sessions (Key Deliverable)

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable will be developed in accordance with the following Contractor's obligations, which will be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverable Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverables for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and analyze County feedback to the draft Deliverables and prepare revised Deliverables.

(8) Distribute the revised Deliverables to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverables including, prior to distribution for Approval by County, validation by Contractor that the Deliverables conform to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee will notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor will make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable will be provided to County with a request for Acceptance. County will notify Contractor of its Acceptance or rejection/issues in a time that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following Services in this SOW for each of the SOWs as well as training regarding AMS, Support Services, and Hosting Services.

Task 1 Conduct SOW Kick-off
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Training and Knowledge Transfer-specific training on the Licensed Software and Third-Party Products will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Training and Knowledge Transfer Workgroup**" or "**County Workgroup**" and the Training and Knowledge Transfer Workgroup will be introduced to various Contractor tools and methodologies, and Best Practice recommendations that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Training and Knowledge Transfer Delivery Consultant;
  ○ Contractor Solution Architect;
  ○ Contractor Solution Delivery Consultants; and
  ○ Contractor Learning Consultant.
• County Key Employees
  ○ Project Director;
  ○ Project Manager; and
  ○ Project SOW Leads.

Task 1 Conduct SOW Kick-off	
Subtasks/Deliverables	
Subtask 1.1 Develop Sub-Project Work Plan for Training and Knowledge Transfer As part of the Project Control Document, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Training and Knowledge Transfer-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online compatible version of Microsoft Project, which shall include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the Training and Knowledge Transfer-specific section of the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this Exhibit A.22 (Training and Knowledge Transfer Statement of Work) and subject to County Approval.	**Deliverable 1.1 Sub-Project Work Plan for Training and Knowledge Transfer** • Training and Knowledge Transfer-specific section of Project Work Plan. **Acceptance Criteria:** • The Training and Knowledge Transfer-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The Training and Knowledge Transfer-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Sub-Project Work Plan for Training and Knowledge Transfer). • The Training and Knowledge Transfer-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the Training and Knowledge Transfer-specific section of the Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of the Training and Knowledge Transfer-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Plan for interacting with other SOW teams to ensure training is considered in those SOWs and relevant materials are developed. • Confirmed availability of Contractor resources required to implement the Training and Knowledge Transfer Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Training and Knowledge Transfer Workgroup Contractor will conduct an initiation session to provide and introduction to the County Workgroup to the Services covered by this Exhibit	**Deliverable 1.2 Training and Knowledge Transfer Initiation Session** • Training and Knowledge Transfer initiation session materials for County review one (1) week prior to Training and Knowledge

Task 1 Conduct SOW Kick-off	

A.22 (Training and Knowledge Transfer Statement of Work), including the timelines and nature of the work effort that will be required to implement this SOW.
Before the Training and Knowledge Transfer Initiation Session, Contractor will:
• Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW;
• Provide County with a roster of kick-off participants;
• Conduct a Project Management Workshop; and
• Develop an agenda/schedule for the Training and Knowledge Transfer initiation session.
Contractor will conduct the Training and Knowledge Transfer initiation session as follows:
• Review and document Licensed Software and Third-Party-Products, Domains, Venues, and Locations for which Training and Knowledge Transfer must be delivered within County;
• Provide background and overview of Project team training and knowledge transfer, including challenges and success criteria;
• Provide an overview of training documents, tools, and methodologies and of the existing Contractor Course catalog;
• Review tasks, Deliverables, and Milestones for the development of Training and Knowledge Transfer materials and activities;
• Illustrate and document dependencies between this SOW and any other SOWs and Project work streams, including at a minimum:
  ○ Requirements gathering and functional/technical specifications during System Review, Design Review, and System Validation;
  ○ Transition to AMS, Support Services, and Hosting Services;
  ○ Testing, including Integration Testing, Peripheral Device Testing and User
	Transfer initiation session.
	• Initial list of County Domains, Venues, and Locations for which Training and Knowledge Transfer capabilities must be delivered for review during Training and Knowledge Transfer initiation session.
	• Report documenting Training and Knowledge Transfer SOW dependencies.
	• List of County Workgroup members who attended the Training and Knowledge Transfer initiation session.
	• List of assignments and roles associated with those assignments for members of County Workgroup.
	• Initiation Session Event Summary Report.
	• Agenda/Schedule for Training and Knowledge Transfer SOW kick-off.
	• Attendance sheet/roster of participants for Training and Knowledge Transfer SOW kick-off.
	• Training and Knowledge Transfer SOW kick-off presentation materials.
	• Training and Knowledge Transfer SOW kick-off Event Summary Report.
	
	Acceptance Criteria:
	• The Initiation Session Event Summary Report from Contractor documents that the Training and Knowledge Transfer initiation session (a) has been completed and (b) includes accurate documentation of the content, outcomes, and next steps agreed upon at the Training and Knowledge Transfer initiation session event.
	• The Training and Knowledge Transfer Initiation Session Event Summary Report has been Approved by County.
	• Report documenting Training and Knowledge Transfer SOW dependencies addresses all elements described in subtask

Task 1 Conduct SOW Kick-off	
Acceptance Testing; ○ Go-Live readiness assessment; and ○ Post-Go-Live assessment; and • Review and develop plans to address dependencies of training and knowledge transfer with other SOWs and Project work streams. After the initiation session, Contractor will prepare an Initiation Session Event Summary Report for review and Approval by County.	1.2 (Conduct Initiation Session for Training and Knowledge Transfer Workgroup). • Report documenting Training and Knowledge Transfer SOW dependencies has been Approved by County. • Agreed upon and understood learning objectives for County personnel. • Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to stated timelines.

Task 2 Develop Master Training Program	
Task Description	
Contractor will develop a Master Training Program for training trainers, users, and other stakeholders in using and/or supporting the EHR System, including the Licensed Software, Third-Party Products, and Hosting Services in accordance with Section 9.5.2 (Training) of the Agreement.	
Personnel Requirements	
• Contractor Key Employees ○ Contractor Learning Consultant; ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Solution Architects; and ○ Contractor Integration Architect. • County Key Employees ○ County Education Coordinator; and ○ County Clinical Strategist.	
Subtasks/Deliverables	
Subtask 2.1 Develop and Maintain Master Training Program Contractor will develop a Master Training Program which includes plans for training trainers, super users, end users (e.g., clinical, risk and quality management, administration), architects, technical support personnel, and other stakeholders in using and/or supporting the EHR System, including the Licensed Software, Third-Party Products, and Hosting Services in accordance with Section 9.5.2 (Training) of the Agreement. The Master Training Program will be developed in	**Deliverable 2.1 Master Training Program** • Draft Master Training Program. • Final Master Training Program. • Updates to Master Training Program and training plans. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 2.1 (Develop and Maintain Master Training Program).

Task 2 Develop Master Training Program	
conjunction with the initial Leading Strategic Change workshop, and will be refined during the five Leading Strategic Change update or touch point sessions. The Master Training Program, to be developed after completion of the Leading Strategic Change Workshop, will at a minimum: • Provide an overview of the strategy for training for the EHR System, including the Licensed Software, Third-Party Products, and Hosting Services, including written guidance and training sessions about training content and organization and an overall description of training which aligns with the County-defined strategy and schedule; • Define, for each training effort, the training subject areas, audience, objectives, approach, development timelines, and Milestones; • Define minimum competencies for County trainers and super users including approach for remediation of deficiencies related to County personnel skills; • Define approach for access to training tools, materials, and domains; • Define components required in individual SOW training plans, such as course outline, schedule, etc.; • Define approach, evaluation processes, and materials to confirm that trainees have absorbed necessary knowledge and information across all training modalities; • Identify approach to evaluating basic computer skills, literacy, and language proficiency; • Define a high-level training schedule for all target audiences based on the logical sequence of how the content should be delivered, availability of the participants, and deployment timing; • Incorporate input from Exhibit A.23 (Deployment Statement of Work) to account	• County-Approved Master Training Program. • County-Approved updates to Master Training Program.

Task 2 Develop Master Training Program	

for deployment sequence and approach;
• Identify touch points and coordination efforts with AMS, Support Services, and Hosting Services;
• Incorporate input (if it is available) or a plan to obtain input (if it is not yet available) from the materials from workflow localization activities of Exhibits A.4 – A.18 to:
  ○ Identify current policies and procedures that will be created, stopped, or standardized to create a DHS-wide standard as a result of data gathering and decision-making workshops with County participation;
  ○ Support County to identify new policies and procedures that require training; and
  ○ Address the training issues raised by the crosswalks between the SOWs which identify interactions and interdependencies;
• Document a process to develop an inventory of policy and procedure changes and document a plan for addressing these in the Master Training Program.
• Document the recommended training materials that will be developed and provided;
• Include a strategy for post Go-Live training (e.g., new staff, temporary staff, new residents, and students from teaching facilities);
• Include a strategy and requirements for training and certifying contracted staff (e.g., registry agencies and individual contractors);
• Include a strategy for identifying and acquiring backfill resources (including projected high-level budgets);
• Provide high-level projections for the physical facilities required; and
• Highlight overall dependencies, Milestones, assumptions, and risks.
Contractor will conduct a review session of the	

Task 2 Develop Master Training Program	
draft Master Training Program with County. Contractor will incorporate County feedback and proposed changes into the Master Training Program and submit a final version to County for Approval. Throughout the Project, Contractor will modify and update the Master Training Program as: • The implementation continues; • Issues arise and are addressed; • New training materials are developed; and • Approaches are refined to incorporate lessons learned through experience and as a result of input provided by members of the Project team, user groups, or Subject Matter Experts.	
Subtask 2.2 Provide a Web Based Training Curriculum Contractor will document the Web Based Training (also referred to as "**WBT**") curriculum, which will be used to provide training to trainers and to end-users. The framework will include at a minimum an overview of the approach, and details on the WBT modules to be provided (including for each module: module name, objective, description, intended audience, course outline, length, co-requisites, and pre-requisites). Contractor will conduct a review session of the draft WBT curriculum with County to identify and address Licensed Software and Third-Party Product subject matter and training gaps in the draft WBT curriculum.	**Deliverable 2.2 Web based training Curriculum** • Draft WBT curriculum including, but not limited to: ○ Registration Management; ○ Scheduling Management; ○ Message Center; ○ RadNet; ○ Perioperative Solution; ○ Order Management; ○ PowerPlans; ○ Clinical Documentation; ○ Pharmnet Inpatient; ○ Health Information Management; ○ PowerChart Maternity Acute; ○ PowerChart; ○ PowerChart Office; ○ PathNet Anatomic Pathology; ○ PathNet Blood Bank Transfusion; ○ PathNet Common Services; ○ PathNet General Laboratory; ○ PathNet Laboratory Management; ○ PathNet Microbiology; ○ PathNet Outreach;

Task 2 Develop Master Training Program	
	○ Emergency; and ○ Anesthesia Management. • Final WBT curriculum. **Acceptance Criteria:** • County-Approved WBT curriculum.
Subtask 2.3 Develop Instructor-Led Training Framework Contractor will develop an Instructor-Led Training Framework and Curriculum that outlines how the Contractor baseline training materials will be modified by County and used for instructor-led training. The Instructor-Led Training Framework and Curriculum will, at a minimum, include: • A description of the different types of training (e.g., train-the-trainer, end-user groups, one-on-one end-user); • Number of different type of trainers required and strategy for acquiring training resources; • The list of courses and events for each type of training (e.g., architecture, troubleshooting, maintenance, technical training, and scenario and role-based end-user, super user, and train-the-trainer); • Details for each recommended course or event, including: ○ Course/event name; ○ Objective; ○ Description and outline; ○ Delivery method and activities, including classroom (onsite or offsite), video, and other media; ○ Duration; ○ Intended audience; ○ Maximum number of participants in each instance of the course or event; ○ Co-requisites and pre-requisites; ○ Evaluation methodology; and	**Deliverable 2.3 Instructor-Led Training Curriculum and Framework** • Draft recommended Instructor-Led Training Framework and Curriculum. • Final Instructor-Led Training Framework and Curriculum.. • Documented plan for developing or changing courses and events to address County feedback. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 2.3 (Develop Instructor-Led Training Framework). • County-Approved Instructor-Led Training Framework and Curriculum.

Task 2 Develop Master Training Program	
○ Implication for privileging (i.e., will demonstration of proficiency be required and what are the implications of failure to successfully complete the course). ● Whether the course or event is part of the current Contractor curriculum or needs to be developed specifically for County resources; and ● Physical facilities required for delivering the training. Contractor will conduct a review session of the draft Instructor-Led Training Framework and Curriculum with County. Contractor will identify courses and events which need to be developed or modified to address County feedback and provide a recommended approach and schedule for the development and delivery of those additions and changes. Contractor will incorporate County feedback and proposed changes into the Instructor-Led Training Framework and Curriculum and submit a final version to County for Approval.	
Subtask 2.4 Develop Knowledge Transfer Plan Contractor will develop and execute a plan for transferring knowledge on the functional and technical aspects of the Licensed Software and Third-Party Products to the County's information technology and functional personnel, other Subject Matter Experts, and especially to those individuals and groups who will conduct Level 1 and Level 2 support. Contractor will draft a Knowledge Transfer Plan based on the Knowledge Transfer Strategy developed in Exhibit A.2 (Project Initiation Statement of Work). This plan will, at a minimum, include: ● Target audiences (e.g., information technology and functional personnel, support teams, other Subject Matter Experts, and trainers); ● Approaches for transferring knowledge and measuring effectiveness; and	**Deliverable 2.4 Knowledge Transfer Plan** ● Draft Knowledge Transfer Plan. ● Final Knowledge Transfer Plan. **Acceptance Criteria:** ● Deliverable addresses all elements described in subtask 2.4 (Develop Knowledge Transfer Plan). ● County-Approved Knowledge Transfer Plan.

Task 2 Develop Master Training Program	
• Mitigation strategies or steps to address the County-specific or typical challenges that the Contractor has faced in successfully transferring knowledge. Contractor will conduct a review session of the draft Knowledge Transfer Plan with County. Contractor will incorporate County feedback and proposed changes into the Knowledge Transfer Plan and submit a final version to County for Approval. Throughout the Project, Contractor will continuously update the Knowledge Transfer Plan as required (e.g., as the Licensed Software implementation continues, as issues arise and are addressed, and as a result of input provided by members of the Project team, users, or Subject Matter Experts).	
Subtask 2.5 Develop Training Development Standards Contractor will document Training Development Standards to be used when developing training materials. These standards provide a common set of rules to make the end product uniform and include items such as language, graphics standards, color schemes, font type and size, naming conventions, and graphic usage. Contractor will review the Training Development Standards with County. Contractor will incorporate County feedback and proposed changes into the Training Development Standards and submit a final version to County for Approval.	**Deliverable 2.5 Training Development Standards** • Draft Training Development Standards. • Final Training Development Standards. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 2.5 (Develop Training Development Standards). • County-Approved Training Development Standards.

Task 3 Develop, Install and Maintain the County Training Environment
Task Description
Contractor will develop, install, and maintain a technical environment (e.g., servers, software, Web Based Training, repository for training materials) to support training and knowledge transfer activities.
Personnel Requirements
• Contractor Key Employees   ○ Contractor Hosting Services System Engineer; and

Task 3 Develop, Install and Maintain the County Training Environment	
○ Contractor Learning Consultant. • County Key Employees ○ County Education Coordinator; ○ County Training Team Leads; ○ County SMEs; and ○ County SOW Leads.	
Subtasks/Deliverables	
Subtask 3.1 Develop Plan for the Training Environment Contractor will develop a Training Environment Plan that includes, at a minimum: • Description of Licensed Software and Third-Party Products, training domains, and technical infrastructure required by County; • Description of infrastructure required by County and to be provided by Contractor to support other training environments (e.g., WBT, LearningLIVE, uCern, mock patient treatment environment); and • Approach to maintaining and managing the training content, including County roles and responsibilities for entering initial data and updating it on an ongoing basis. Contractor will review the draft Training Environment Plan with County. Contractor will incorporate County feedback and proposed changes into the Training Environment Plan and submit a final version to County for Approval.	**Deliverable 3.1 Training Environment Plan** • Draft Training Environment Plan. • Final Training Environment Plan. **Acceptance Criteria:** • County-Approved Training Environment Plan. • County-Approved Training Environment Session Event Summary Report.
Subtask 3.2 Install and Maintain the County Training Environment Contractor will implement a training environment to support training and knowledge transfer activities. Contractor will install and test the training environment using County-entered data, including, at a minimum: • Hardware and operating software; • Networking and communications infrastructure;	**Deliverable 3.2 Training Environments** • Implemented and ongoing management of training environments. • Appropriate County access to training environments. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 3.2 (Install and Maintain the County Training Environment). • County-Approved training environments and

Task 3 Develop, Install and Maintain the County Training Environment	

• Training version of Licensed Software and Third-Party Products; and
• Other hardware and software required to conduct training (e.g., for uCern, LearningLIVE, mock patient training environments).
Contractor will ensure:
• Timely provision of access to County users to:
  ○ Support, collaboration, and documentation help (e.g., uCern);
  ○ Online context-driven user help (e.g., LearningLIVE);
  ○ Hosted training environments; and
  ○ Nightly refreshes of training environment.
• Timely access to Web Based Training (e.g., trial access for Workgroups during early Project stages, full production use for trainers during development of training plans and during deployment, and for relevant users before their facility or Cluster goes live).
Contractor will maintain the training environment throughout the duration of the Project.
	use thereof.

Task 4 Develop Training and Support Materials	
Task Description	
Contractor will develop Training and Support Materials for all Licensed Software and Third-Party Products as well as training regarding AMS, Support Services, and Hosting Services.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Learning Consultant; and
  ○ Contractor Delivery Consultants.
• County Key Employees
  ○ County Education Coordinator;
  ○ County Training and Knowledge Transfer SOW Lead; and
  ○ County SMEs.	

Subtasks/Deliverables	
Subtask 4.1 Develop Training Materials Contractor will: • Provide access to example Training and Support Materials and guides which County	**Deliverable 4.1 Training Materials** • Example Training and Support Materials for technical and support staff, architects, trainers, super-users, and end-users.

Task 4 Develop Training and Support Materials	
can customize to address the needs identified in the task 2 (Develop Master Training Program); and • Provide example Training and Support Materials (e.g., lesson plans, scenarios, reference guides, scripts, videos, FAQs) that County can localize to the County-specific build. Contractor will provide County with access to Training and Support Materials to enhance training, knowledge transfer, and adoption including: • Sample demonstration scripts, which will be used by County and Contractor staff to be customized and deliver application demonstrations for end-users and other key stakeholders; • Access to user guides in the form of booklets, one page checklists, and pocket or reference guides that County can customize for its build; and • Sample checklists and scripts to be used by County helpdesk personnel to triage problems and issues, and to help to deliver Level 1 support. For all activities Contractor will: • Review County activities, and Deliverables as County makes changes and creates new training materials; • Provide advice and direction to enhance effectiveness of such materials; • Identify systemic issues related to completion of training materials (e.g., capacity and capability of resources, complexity of approach, adequacy of tools) and provide County with recommendation for addressing them (e.g., through additional tools, training, resources); and • Provide additional resources (as approved through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)) to address issues and	• Review of, and advice for, enhancing County Training and Support Materials. • Recommendations and support for successful development and delivery of Training and Support Materials. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 4.1 (Develop Training Materials). • County receipt and Approval of Training and Support Materials. • County receipt and Approval of Training and Support Material review and recommendation reports.

Task 4 Develop Training and Support Materials	
recommendations above.	
Subtask 4.2 – Implement and Deploy the LearningLIVE Environment Contractor will deploy the LearningLIVE solution, which provides real-time, contextual learning. Contractor's implementation of LearningLIVE will include: • Installation, design, configuration, maintenance training, and validation of the LearningLIVE solution; • Design, configuration, maintenance training, and validation of the LearningLIVE reporting dashboard; • Administrator access to Cerner Learning Manager to retrieve LearningLIVE activity data; and • Cerner Learning Manager administrative access to reports. Contractor will provide the following for LearningLIVE deployment: • LearningLIVE Project Kickoff; • LearningLIVE Design Review - Review design recommendations and decisions, best practices, and data (learning asset) collection; • LearningLIVE Configuration - Configure the LearningLIVE view(s) in County's domain; • Learning Asset Development and Data Collection - Develop up to 80 learning assets (job aids and videos) and complete the DCW to facilitate the design and build; • LearningLIVE Maintenance Training - Knowledge transfer of how to update the LearningLIVE view(s) and dashboard; • LearningLIVE Integration Testing and Go-Live Preparation - Validate LearningLIVE configuration and integration with Cerner Learning Manager, complete Go-Live readiness assessment, review Project tasks, and discuss communication plan;	**Deliverable 4.2 – LearningLIVE Environment** • Operational LearningLIVE environment. • LearningLIVE assets integrated with Licensed Software. • LearningLIVE dashboard. • County personnel trained and capable of developing LearningLIVE assets and incorporating them into the County solution. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 4.2 (Implement and Deploy the LearningLIVE environment). • County Approval of operational LearningLIVE environment and staff capabilities for its use.

Task 4 Develop Training and Support Materials	
• LearningLIVE Go-Live - Delivery of LearningLIVE view(s) and LearningLIVE dashboard; and • LearningLIVE Post-Go-Live Review - Evaluation of LearningLIVE outcomes and County satisfaction.	

Task 5 Develop Training and Knowledge Transfer Schedule	
Task Description	
Contractor will support County to develop a detailed Training and Knowledge Transfer Schedule for trainers, technical and support staff, super users, and end-users for each Cluster deployment.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Learning Consultant; and
  ○ Contractor Engagement Controller.
• County Key Resources
  ○ County Education Coordinator; and
  ○ County Training Leads.	

Subtasks/Deliverables	
Subtask 5.1 Develop Training and Knowledge Transfer Schedule Contractor will draft a detailed Training and Knowledge Transfer Schedule for all types of training and all audiences for each Cluster deployment that includes, at a minimum: • Target audiences for each Domain, Venue, and Location; • Content, format (e.g., instructor led and web-based) and methodology (e.g., on the job training) to be delivered for each audience in logical sequence; • Required availability of trainees (including County-provided accommodation for participants from all shifts – day, swing, overnight); • Requirements for physical facilities for training at each facility and other County-specified locations for end-user training; • Requirements for physical facilities for training	**Deliverable 5.1 Training and Knowledge Transfer Schedule** • Draft overall maintenance and support training schedule. • Draft up-front train-the-trainer training schedule. • Draft template for Cluster and facility-based deployment Training and Knowledge Transfer Schedules. • Specific schedules for training for each Cluster or facility-based Go-Live. • Final Training and Knowledge Transfer Schedules incorporating County feedback. • Updates to Training and Knowledge Transfer Schedules incorporating lessons learned and risks and issues. **Acceptance Criteria:** • Deliverable addresses all elements described

Task 5 Develop Training and Knowledge Transfer Schedule	
to address: ○ Overall maintenance and support training; ○ Up-front train-the-trainer training; and ○ Cluster and facility based deployment training. Contractor will review the draft Training and Knowledge Transfer Schedules with County. Contractor will incorporate County feedback and proposed changes into each deployment-specific Training and Knowledge Transfer Schedule and submit a final version to County for Approval. Throughout each Cluster deployment, Contractor will support County to maintain and update the Training and Knowledge Transfer Schedule identifying risks and making recommendations to address identified risks and issues.	in subtask 5.1 (Develop Training and Knowledge Transfer Schedule). • County Approved Training and Knowledge Transfer Schedule.

Task 6 Conduct Implementation Team Training	
Task Description	
Contractor will conduct training for the implementation team.	
Personnel Requirements	
• Contractor Key Employees ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Solution Architects; ○ Contractor Delivery Consultants; ○ Contractor Learning Consultant; and ○ Contractor Integration Architect. • County Key Employees ○ County SOW Leads; ○ County Education Coordinator; ○ County Training Team Leads; and ○ County SMEs.	
Subtasks/Deliverables	
Subtask 6.1 Conduct Implementation Team Training Contractor will conduct training on the Licensed Software, Third-Party Products, and Hosting Services for the implementation team. This will include the Millennium Fundamentals course.	**Deliverable 6.1 Implementation Team Training** • Agenda for Implementation Team Training. • Implementation Team Training roster of participants. • Proficient implementers ready to start work

Task 6 Conduct Implementation Team Training	
Contractor will: • Develop and distribute an Implementation Team Training agenda; • Identify appropriate audience for Implementation Team Training; and • Provide County with a roster of participants. The Implementation Team Training will cover at a minimum: • The architecture, terminology, and fundamental components of the Licensed Software and Third-Party Products; • Basic key technical concepts and design considerations for Licensed Software and Third-Party Products solutions; • Navigating front-end applications, including PowerChart; • Navigating backend applications, including Reflections and Discern Explorer, to perform queries; • Patient care hierarchy and locations; • Interpreting incoming HL7 messages; • Alias pools in the database build tools; • Match and reconcile processes; • Order catalog and the synonym types; • Results storage and display ; and • Security including authentication, authorization, positions, relationships, application groups, and privileges. Contractor will: • Ensure that all identified individuals complete the necessary Implementation Team Training and achieve the necessary proficiency scores on all evaluations; • Track completion of the Implementation Team Training and report progress to County on a regular basis and by user role, location, and other attributes as specified by County; • Identify systemic issues related to Implementation Team Training (e.g., time	on the design and configuration. • Proficiency assessment. • Documented progress reviews and recommendations for enhancing training and addressing identified issues. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 6.1 (Conduct Implementation Team Training.) • Successful completion of training of all County Workgroup members responsible for implementation (based on results documented in training proficiency assessment). • County-Approved progress reviews.

Task 6 Conduct Implementation Team Training	
management, complexity, facilities, tools, materials) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources); and • Provide additional resources to address issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).	

Task 7 Conduct Train-the-Trainer and Super User Training	
Task Description	
Contractor will conduct Train-the-Trainer and Super User Training in accordance with the Master Training Program developed in task 2 (Develop Master Training Program).	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Training and Knowledge Transfer Delivery Consultant;
  ○ Contractor Solution Architect;
  ○ Contractor Integration Architect;
  ○ Contractor Learning Consultants;
  ○ Contractor Project Director; and
  ○ Contractor Project Manager.
• County Key Employees
  ○ County Education Coordinator;
  ○ County Training Leads;
  ○ County SOW Leads;
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SMEs; and
  ○ County Super Users.	

Subtasks/Deliverables	
Subtask 7.1 Conduct Train-the-Trainer and Super User Training Contractor will conduct Train-the-Trainer during the System Validation event for the IT analysts and County SMEs. Contractor will conduct additional onsite Train-the-Trainer classes as defined in the Master Training Program developed in task 2 (Develop Master Training Program). Additionally,	**Deliverable 7.1 Train-the-Trainer and Super User Training** • Proficient trainers ready to deliver necessary end-user training. • Proficiency Assessment. • Documented progress reviews and recommendations for enhancing training

Task 7 Conduct Train-the-Trainer and Super User Training	
Contractor will conduct additional onsite super user training ("**Super User Training**") classes for up to three hundred (300) super users as defined in the Master Training Program developed in task 2 (Develop Master Training Program). Super User Training shall be provided at no additional charge to County, except for Approved Supplemental Travel as set forth in Exhibit C (Fees; Contractor Professional Services Rates). Super users are individuals who are selected by County to obtain and maintain enhanced knowledge and abilities in the use of the EHR System. They are often called upon to support their colleagues and peers with the use of the EHR System, and may also support training during the initial training and implementation period and on an on-going basis. Contractor will: • Ensure that SMEs, SOW leads, IT leads, and 300 super users complete the necessary training courses, attend the required instructor led training, and achieve the necessary proficiency scores on all evaluations; • Track completion of the training and report progress to County on a regular basis and by user role, location, and other attributes as specified by County; • Identify systemic issues related to training the trainers (e.g., time management, complexity, facilities, tools, materials) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources); and • Provide additional resources to address issues and recommendations above related to the SMEs, SOW leads, IT leads and 300 super users initially identified by County and scheduled for initial training sessions (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).	and addressing identified issues. **Acceptance Criteria:** • Successful completion of training of all identified trainers (based on results documented in training proficiency assessment). • Deliverables address all required elements described in Task 7.1 (Conduct Train-the-Trainer and Super User Training). • County-Approved progress reviews.

Task 8 Support End-User Training	
Task Description	
For each Cluster deployment, Contractor will support end-user training in accordance with the Master Training Program developed in task 2 (Develop Master Training Program) and the Training and Knowledge Transfer Schedule identified in task 5 (Develop Training and Knowledge Transfer Schedule.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Learning Consultants; and
  ○ Contractor Education Coordinator.
• County Key Resource
  ○ County Training Leads;
  ○ County Education Coordinator;
  ○ County Super Users; and
  ○ County SMEs.	

Subtasks/Deliverables	
Subtask 8.1 Support End-User Training Contractor will support end-user training as defined in the Master Training Program developed in task 2 (Develop Master Training Program). Contractor will: • Track completion of the training and assess proficiency using tracking tool; • Identify specific user roles who may need specialized training (e.g., one-on-one training, at-the-elbow-support, post Go-Live additional training or support) based on Contractor's prior experience and on industry and Contractor Best Practices; • Make recommendations for delivery of the specialized training needs; • Identify systemic issues related to training end-users (e.g., time management, complexity, facilities, tools, materials) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources); and • Provide additional resources to address issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process	**Deliverable 8.1 Support End-User Training** • Proficiency assessment tool(s). • Results of proficiency assessment. • Documented training progress reviews including identification of systemic issues related to training end-users. • Recommendations for enhancing training and addressing identified issues. • Remediation plan and additional resources to address issues and recommendations above. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 8.1 (Support End User Training). • Successful completion of training of all identified end-users for each Cluster deployment (based on results documented in training proficiency assessment). • County-Approved progress reviews.

Task 8 Support End-User Training	
defined in Exhibit A.2 (Project Initiation Statement of Work)).	
Subtask 8.2 Support End-User Survey and Develop End-User Training Effectiveness Reports Following the completion of end-user training and the initial deployment period, Contractor will develop an End-User Survey and conduct an analysis of the results from a County-administered survey of end-users. This survey will include at a minimum evaluation of the following: • Training materials; • Training methodology; • Instructor; • Training session; • New skills acquired; and • Ability to use the Licensed Software application on a daily basis. Contractor will compile and analyze the survey results and provide County with an End-User Training Effectiveness Report. Contractor will develop recommendations on how to improve on training deficiencies discovered as part of the End-User Training Effectiveness Report. Contractor will review End-User Training Effectiveness Report and recommendations with County.	**Deliverable 8.2 End-User Survey and End-User Training Effectiveness Reports** • End-User Survey. • End-User Training Effectiveness Report. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 8.2 (Support End-User Survey and Develop End-User Training Effectiveness Reports). • County-Approved End-User Survey summary results report. • County-Approved Training Effectiveness Report.
Subtask 8.3 – Post Go-Live Evaluation of Training Efficacy Following Go-Live, Contractor will assess the training effectiveness as measured by such means as reported and observed ease of EHR System usage, help desk calls, analysis of LearningLIVE dashboards, and activity reports, etc. Contractor will compile and analyze the post Go-Live training assessment and will develop recommendations on how to improve on training. Contractor will review End-User Training Effectiveness Report and recommendations with County. Contractor will provide additional resources to	**Deliverable 8.3 Post Go-Live Training Efficacy Report** • Post Go-Live Training Efficacy Report. • Recommendations for enhancing training effectiveness. • Recommendations for enhancing training and addressing identified issues. • Remediation plan and additional resources to address issues and recommendations above. **Acceptance Criteria:** • Deliverable addresses all elements described

Task 8 Support End-User Training	
address issues and recommendations above (the resources will be those determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work)).	in subtask 8.3 (Post Go-Live Evaluation of Training Efficacy). • County Approved Post Go-Live Training Efficacy Report.

Task 9 Conduct Support Team Training	
Task Description	
Contractor will conduct training for technical support teams (e.g., individuals delivering Level 1 and 2 support, maintaining system configuration, maintaining solution architecture, etc.) in accordance with the Master Training Program developed in task 2 (Develop Master Training Program).	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor Delivery Consultants;
  ○ Contractor Project Manager;
  ○ Contractor AMS Project Manager;
  ○ Contractor Hosting Services Project Manager; and
  ○ Contractor Hosting Services System Engineer.
• County Key Employees
  ○ County SOW Leads;
  ○ County Project Manager;
  ○ County Help Desk Leads;
  ○ County Technical Manager; and
  ○ County Desktop Technicians.	

Subtasks/Deliverables	
Subtask 9.1 Develop Help Desk Scripts Contractor will support County in the creation of help desk scripts by providing sample Level 1 and Level 2 Help Desk Scripts and tip sheets, including: • County and Contractor roles and responsibilities related to provisioning of Level 1 and Level 2 Help Desk support; • Procedures for logging and tracking issues; • Procedures for handing off tickets from County to Contractor for resolution (including closure of tickets and related communications); • Procedures for handing off tickets from Contractor to County for resolution (including closure of tickets and related	**Deliverable 9.1 Go-Live Help Desk Scripts** • Level 1 Help Desk Scripts. • Level 2 Help Desk Scripts. **Acceptance Criteria:** • Level 1 and Level 2 Help Desk Scripts incorporate, and are consistent with, County provided input. • Level 1 and Level 2 Help Desk Scripts have been Approved by County.

Task 9 Conduct Support Team Training	
communications); and • Update after each deployment. Contractor will review the County developed Level 1 and Level 2 Help Desk Scripts with County. County will incorporate Contractor feedback and proposed changes into the Level 1 and Level 2 Help Desk Scripts.	
Subtask 9.2 Conduct Support Training Contractor will conduct general maintenance training for County resources that will be responsible for common maintenance activities. This training will be delivered through existing Contractor courses: • Application troubleshooting and issues management; and • Technical training. The Support Training will include: • Licensed Software architecture terminology and tier functions; • Basic troubleshooting techniques; • Issue resolution process; • Submitting service records; • Conducting data gathering for issue resolution; • Tier functions; • Coordination and hand-offs to Contractor AMS and Hosting Services; and • Using Licensed Software information resources including the eService Knowledge Base, UCern, and other resources. The Technical Training will include: • Overview of CernerWorks remote hosting organization; • Problem Management; • Cerner Technology Center overview; • Technology roadmap; • Overview of Licensed Software environments and their purpose;	**Deliverable 9.2 Support Training** • Proficient individuals ready to provide support and conduct general maintenance and operations. • Proficiency assessment. • Recommendations for enhancing training and addressing identified issues. • Remediation plan and additional resources to address issues and recommendations above. **Acceptance Criteria:** • Deliverables address all elements described in subtask 9.2 (Conduct Support Training). • Successful completion of training of all identified relevant technical staff (based on results documented in training proficiency assessment).

Task 9 Conduct Support Team Training	
• Implementation and production domain strategies; • High level overview of Licensed Software architecture; • Connectivity overview; • On-going communication with Contractor Personnel responsible for Hosting Services; • How to receive technical support; • Weekly and monthly service reporting; • Proper identification and classification of service requests; • Critical effects classifications and severity levels of incident; • Change management process and requirements; • System maintenance; • Domain refreshes; • Code upgrades; • Lights On Network; and • Support tools overview for County IT and help desk staff. In addition, Contractor will: • Track completion of the training using a tool and will report progress to County on a regular basis and by user role, location, and other attributes as specified by County; • Conduct proficiency assessments and provide additional training as necessary until all County personnel have achieved a sufficient level of understanding; • Make recommendations and support the delivery of the specialized training needs; and • Identify systemic issues related to training end-users (e.g., time management, complexity, facilities) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources).	

Task 9 Conduct Support Team Training	
Subtask 9.3 Conduct Coaching Sessions for County Personnel Responsible for Maintaining System During design and configuration and during the period surrounding Go-Lives, the Contractor Solution Architect and Contractor Training and Knowledge Transfer Delivery Consultant will conduct weekly coaching sessions for County personnel responsible for Licensed Software and Third-Party Product application components and content maintenance. These sessions will at a minimum include: • Coverage of one maintenance topic per week; • Hands-on practice; and • Review of sample support activities. Contractor will develop a report summarizing the information provided during the coaching sessions.	**Deliverable 9.3 Coaching Sessions** • Weekly coaching sessions. • Summary report on coaching sessions. **Acceptance Criteria:** • Deliverable addresses all elements described in subtask 9.3 (Conduct Coaching Sessions for County Personnel Responsible for Maintaining System). • Delivery of weekly coaching sessions.

Task 10 Conduct Dashboards, Custom Reporting, and Data Analytics Training
Task Description
Contractor will conduct training for the County analytics team in accordance with the Master Training Program developed in task 2 (Develop Master Training Program).
Personnel Requirements

• Contractor Key Employees
  ○ Contractor Learning Consultant;
  ○ Contractor Project Manager;
  ○ Contractor CCL System Engineer;
  ○ Contractor Training and Knowledge Transfer Delivery Consultant; and
  ○ Contractor Education Coordinator.
• County Key Employees
  ○ County Project Manager;
  ○ County Education Coordinator;
  ○ County Training Leads;
  ○ County Super Users;
  ○ County SOW Leads;
  ○ County PowerInsight Leads; and
  ○ County Reporting Leads.

Task 10 Conduct Dashboards, Custom Reporting, and Data Analytics Training	
Subtasks/Deliverables	
Subtask 10.1 Conduct Dashboards, Custom Reporting, and Data Analytics Training Contractor will provide Dashboards, Custom Reporting and Data Analytics Training to the County analytics team responsible for custom queries, report writing, and maintenance of dashboards. Contractor will: • Develop and distribute a Dashboards, Custom Reporting, and Data Analytics Training agenda; • Work with County to identify appropriate audience for Dashboards, Custom Reporting, and Data Analytics Training; • Provide County with a roster of participants; • Provide training on analytics tools including Cerner Command Language ("**CCL**"), PowerInsight, Dashboard Modification, queries and custom reporting, and creation of Continuity of Care Documents; • Provide an initial library of reports, queries, and dashboards for all components of Licensed Software; and • Provide training on how to use and modify the initial set of queries and dashboards. Contractor will: • Track completion of the training using a tool and will report progress to County on a regular basis by user role, location, and other attributes as specified by County; • Conduct proficiency assessments and provide additional training as necessary until the designated County staff have achieved a sufficient level of understanding; • Make recommendations and support the delivery of the specialized training needs required for proficient custom reporting and data analytics; and • Identify systemic issues related to training analytics team (e.g., time management,	**Deliverable 10.1 Dashboards, Custom Reporting, and Data Analytics Training** • Agenda for Dashboards, Custom Reporting, and Data Analytics Training. • List of participants in Dashboards, Custom Reporting, and Data Analytics Training. • Proficient individuals ready to develop queries, deliver custom reports, and conduct relevant data analytics. • Proficiency assessment. • Recommendations for enhancing training and addressing identified issues. • Remediation plan and additional resources to address issues and recommendations above. • Weekly calls to answer questions and provide additional training. **Acceptance Criteria:** • Deliverables address all elements described in subtask 10.1 (Conduct Dashboards, Custom Reporting, and Data Analytics Training). • Successful completion of training of the County data analytics and report writing team.

Task 10 Conduct Dashboards, Custom Reporting, and Data Analytics Training	
complexity, facilities) and provide County with recommendation for addressing them (e.g., through additional training, augmenting resources). Contractor will conduct a training proficiency assessment and provide a weekly sixty (60) minute call to answer questions and provide additional training until the identified County analytics personnel have achieved a sufficient level of understanding.	
Subtask 10.2 Conduct Coaching Sessions for Data Analytics and Report Writing Team During the period surrounding the initial Go-Live Contractor will conduct coaching sessions for County staff responsible for data analytics, query, and reporting. These sessions will at a minimum include: • Question and answer and issue resolution; and • Review of sample query and reporting support activities using the training environment. Contractor will develop a report summarizing the information provided during the coaching sessions.	**Deliverable 10.2 Coaching Sessions** • Weekly coaching sessions. • Coaching session summary reports. **Acceptance Criteria:** • Deliverables address all elements described in subtask 10.2 (Conduct Coaching Sessions for Data Analytics and Report Writing Team). • Delivery of weekly coaching sessions.

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.23 (Deployment Statement of Work)

to the

Electronic Health Records System and Services Agreement

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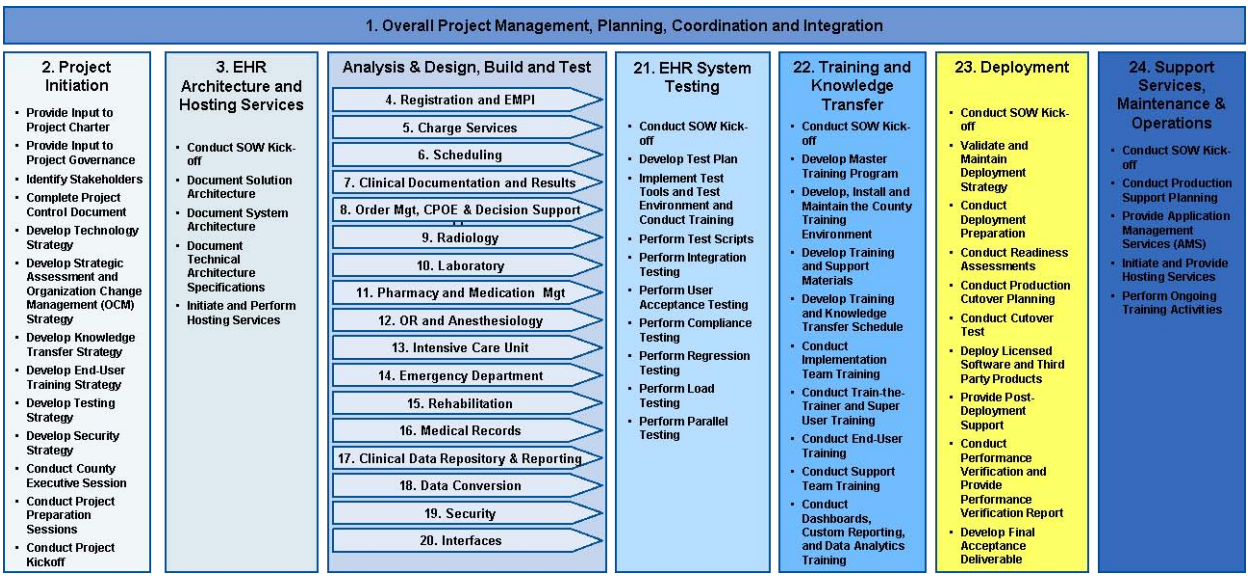
1. Introduction

This Exhibit A.23 (Deployment Statement of Work) (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement will prevail and nothing in this SOW will modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW will have the same meanings as used in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System, as required under this Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.23 (Deployment Statement of Work). The completion of any phase in a period of time shorter or longer than that specified below shall not increase the Contract Sum.

This is Exhibit A.23 (Deployment Statement of Work). It is one of a series of twenty-four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty-four (24) SOWs are as follows:



2. Business Objectives Supported

Completion of this SOW will provide the framework which will be used to deploy all Clusters of the EHR System implementation over the course of the Project.

3. SOW Summary

3.1 Overview

This SOW addresses Services related to the deployment of the Licensed Software to County inpatient hospitals and ambulatory clinics across all six (6) Clusters, including readiness assessments, post-deployment Services and performance verification.

The Project will be conducted using the key steps and Deliverables defined in the Contractor's MethodM implementation methodology, as adapted by this SOW, including:

- ***Stop, Start, Continue Method*** to identify which current key activities will no longer be performed, which will continue, and which new activities will be completed per role;
- ***Clinical Automation*** to automate clinical and business workflows based on current Contractor Best Practices and recommendations;
- ***Walk-throughs*** to validate current workflow/processes and develop recommendations for improvement;
- ***MethodM Online tool*** to collect data and track critical design decisions;
- ***Contractor Bedrock wizards*** to guide the process of designing and building the Licensed Software; and
- ***START database content*** which provides pre-built tables and forms to facilitate database design and build, and help the continuity of testing repeatable processes.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy staff to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Deliverables from the domain specific analysis, design, and build SOWs (Exhibits A.4 – A.20) will provide the functionality and content of Licensed Software and Third-Party Products that is required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined –Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

3.5 Schedule

The commencement date for this Exhibit A.23 (Deployment Statement of Work) will begin as indicated in the Project Work Plan. The Services under this SOW is scheduled to be completed as indicated in the Project Work Plan, and upon Acceptance by the County Project Director of the Deliverables in this Exhibit A.23 (Deployment Statement of Work).

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated full-time on-site key Project leadership members to deliver the Services during normal business hours, 8:00 AM to 5:00 PM, Pacific Time, Monday through Thursday (accommodating for travel on Mondays), except County and Contractor recognized holidays, unless otherwise agreed by the Parties in writing. Project leadership that is not on-site will also be available during normal business hours, 7:00 AM to 3:30 PM, Pacific Time, unless otherwise agreed by the Parties in writing. During deployment to each Cluster the core Project team will be available around the clock as necessary.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with this Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Contractor Delivery Consultant**") to whom all County communications may be

addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and Service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, Service Interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track, and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

The County will assign a lead for this SOW (referred to in this Exhibit as the "**County Deployment SOW Lead**" or "**County SOW Lead**". The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule; and

(11) Participate in selected Project status meetings with Contractor's Project team members, and schedule and coordinate attendance and participation of County personnel for interviews, meetings, and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor Personnel while working at County's facilities;

(2) Locate the Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor personnel working at County's facilities; and

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Detailed Deployment-Specific Section of the Sub-Project Work Plan	Deliverable 1.1 Deployment-Specific Section of the Sub-Project Work Plan (Key Deliverable)

Task/Subtask Name	Deliverables
Subtask 1.2 Conduct Initiation Session for Deployment Workgroup	Deliverable 1.2 Deployment Initiation Session (Key Deliverable)
Task 2 Validate and Maintain Deployment Strategy	
Subtask 2.1 Validate and Maintain Deployment Strategy	Deliverable 2.1 Deployment Strategy (Key Deliverable)
Task 3 Conduct Deployment Preparation	
Subtask 3.1 Develop Go-Live Go/No-Go Decision Framework and Processes	Deliverable 3.1 Go-Live Go/No-Go Decision Framework and Processes (Key Deliverable)
Subtask 3.2 Develop Backfill Procedures	Deliverable 3.2 Backfill Procedures (Key Deliverable)
Subtask 3.3 Develop Go-Live Event Staffing and Support Model	Deliverable 3.3 Go-Live Event Staffing and Support Model (Key Deliverable)
Subtask 3.4 Develop Go-Live Help Desk Scripts	Deliverable 3.4 Go-Live Help Desk Scripts (Key Deliverable)
Subtask 3.5 Develop Operations and Administration Procedures Related to the Deployment	Deliverable 3.5 Operations and Administration Procedures Related to the Deployment (Key Deliverable)
Subtask 3.6 Develop Deployment and Project Close-out Checklist	Deliverable 3.6 Deployment and Project Close-out Checklist (Key Deliverable)
Subtask 3.7 Develop Solution Readiness Framework	Deliverable 3.7 Solution Readiness Framework (Key Deliverable)
Task 4 Conduct Readiness Assessments	
Subtask 4.1 Conduct Technical Readiness Assessment	Deliverable 4.1 Technical Readiness Assessment (Key Deliverable)
Subtask 4.2 Conduct Functional Readiness Assessment	Deliverable 4.2 Functional Readiness Assessment (Key Deliverable)
Subtask 4.3 Conduct Location Readiness Assessment	Deliverable 4.3 Location Readiness Assessment (Key Deliverable)
Task 5 Conduct Production Cutover Planning	
Subtask 5.1 Develop Production Cutover Plan	Deliverable 5.1 Production Cutover Plan (Key Deliverable)
Subtask 5.2 Develop Emergency Roll-back Plan	Deliverable 5.2 Emergency Roll-back Plan (Key Deliverable)
Subtask 5.3 Conduct Go-Live Go/No-Go Meetings	Deliverable 5.3 Go-Live Go/No-Go Meetings (Key Deliverable)

Task/Subtask Name	Deliverables
Task 6 Initiate Hosting Services for Production Environment	
Subtask 6.1 Initiate Remote Hosting Services for Production Environment	Deliverable 6.1 Remote Hosting Services for Production Environment (Key Deliverable)
Task 7 Conduct Cutover Simulation	
Subtask 7.1 Conduct Cutover Test	Deliverable 7.1 Cutover Test Conducted and Documented (Key Deliverable)
Task 8 Deploy Licensed Software and Third-Party Products	
Subtask 8.1 Conduct Deployment	Deliverable 8.1 Successful Deployment (Key Deliverable)
Task 9 Provide Post-Deployment Support	
Subtask 9.1 Provide Post Go-Live Support	Deliverable 9.1 Post Go-Live Support (Key Deliverable)
Subtask 9.2 Transition to Application Management Services	Deliverable 9.2 Application Management Services (Key Deliverable)
Subtask 9.3 Conduct Post Go-Live Assessment	Deliverable 9.2 Post Go-Live Assessment (Key Deliverable)
Task 10 Conduct Performance Verification and Provide Performance Verification Report	
Subtask 10.1 Conduct Performance Verification Activities	Deliverable 10.1 Performance Verification Activities (Key Deliverable)
Task 11 Develop Final Acceptance Deliverable	
Subtask 11.1 Provide Documented Final Acceptance Deliverable	Deliverable 11.1 Final Acceptance Deliverable

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable will be developed in accordance with the following Contractor obligations, which will be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverable Expectations Document ("**DED**") approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template) of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverables.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverables for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and analyze County feedback to the draft Deliverables and prepare revised Deliverables.

(8) Distribute the revised Deliverables to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverables including, prior to distribution for Approval by County, validation by Contractor that the Deliverables conform to the Specifications and meets the Acceptance Criteria.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee will notify the Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor will make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable will be provided to County with a request for Acceptance. County will notify Contractor of its Acceptance or rejection in a time that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor will be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Deployment-specific training on the Licensed Software will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Deployment Workgroup**" or "**County Workgroup**" and the County Deployment Workgroup will be introduced to various Contractor tools, methodologies and Best Practices that will be used throughout this SOW.
Personnel Requirements

All roles previously involved in the Project are engaged in the deployment activities including the following.
• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Interface Architect;
  ○ Contractor Solution Architects;
  ○ Contractor Delivery Consultants;

Task 1 Conduct SOW Kick-off	
○ Contractor Hosting Services Engagement Leader; ○ Contractor Technical Engagement Leader; ○ Contractor Hosting Services System Engineer; ○ Contractor Hosting Services Network Engineer; and ○ Contractor AMS Services Engagement Leader. • County Key Resources ○ County Project Director; ○ County Project Manager; ○ County SOW Team Leads; ○ County Technical Manager; ○ County Desktop Technicians; ○ County Network Engineers; ○ County Helpdesk; and ○ County Interface Lead.	
Subtasks/Deliverables	
Subtask 1.1 Develop Detailed Deployment-Specific Section of the Sub-Project Work Plan As part of the Project Control Documentation, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Deployment-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in a MethodM Online compatible version of Microsoft Project, which will include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort – days and shifts, and roles) from Contractor, County, and potential third-party or foreign system vendors required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the Deployment-specific section of the Project Work Plan to create a	**Deliverable 1.1 Deployment-Specific Section of the Sub-Project Work Plan** • Deployment-specific section of Project Work Plan. • Sub-Project Work Plan for Deployment. **Acceptance Criteria:** • The Deployment-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The Deployment-specific section of the Project addresses all elements described in subtask 1.1 (Develop Detailed Deployment-Specific Section of the sub-Project Work Plan) and includes requirements for involvement of any potential third-party or foreign system vendors. • The Deployment-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the Deployment-specific section of the Project Work Plan and sub-Project Work Plans are realistically achievable with reasonable effort as determined by County. • Elements of the Deployment-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined

Task 1 Conduct SOW Kick-off	
specific sub-Project Work Plan which includes timelines, activities, Deliverables, and Milestones specific to this SOW and subject to County Approval. Contractor will update the Deployment-specific section of the Project Work Plan after each deployment to incorporate experience and lessons learned from prior deployments.	in this and other SOWs. • Confirmed availability of Contractor resources required to implement the Deployment Project Work Plan.
Subtask 1.2 Conduct Initiation Session for Deployment Workgroup Contractor will conduct a Deployment initiation session to provide an introduction to the County Workgroup to the Services covered by this SOW, including the timelines and nature of the work effort that will be required to implement this SOW. Before the Deployment Initiation Session, Contractor will: • Work with County to identify all Contractor, County, and any potential third-party vendor resources, should they be required to complete the tasks outlined in this SOW; • Provide County with a roster of kick-off participants; • Conduct a Project Management Workshop as described in task 12 (Conduct Project Preparation Sessions) of Exhibit A.2 (Project Initiation); and • Develop an agenda/schedule for the Deployment Initiation Session. The Deployment Initiation Session will include at least the following: • Illustrate and document dependencies between this SOW and any other SOWs and Project work streams; • Review Cutover Plan and Post-Go-Live support approach; • Review tasks, Deliverables, and Milestones for the deployments; and • Train the County Workgroup on the required process and tools used to support Contractor in the deployment and related activities. After the Deployment Initiation Session,	**Deliverable 1.2 Deployment Initiation Session** • Deployment Initiation Session materials for County review. • Report documenting Deployment SOW dependencies. • Deployment Initiation Session Event Summary Report. • Deployment SOW kick-off presentation materials. • Deployment Initiation Session Event Summary Report. **Acceptance Criteria:** • The Deployment Initiation Session Event Summary Report from Contractor documents that the Deployment initiation session (a) has been completed and (b) includes accurate documentation of the content, outcomes, and next steps agreed upon at the Deployment Initiation Session. • The Deployment Initiation Session Event Summary Report has been Approved by County. • Report documenting Deployment SOW dependencies addresses all elements described in subtask 1.2 (Conduct Initiation Session for Deployment Workgroup). • Report documenting Deployment SOW dependencies has been Approved by County. • Agreed upon and understood learning objectives for County personnel. • Contractor evidence that County personnel have achieved stated learning objectives required for Project progression according to

Task 1 Conduct SOW Kick-off	
Contractor will prepare a Deployment Initiation Session Event Summary Report for review and Approval by County.	stated timelines.

Task 2 Validate and Maintain Deployment Strategy	
Task Description	
During this task Contractor will review and provide feedback to County's Deployment Strategy for the implementation of the EHR System to the inpatient hospitals and hospital-based and outlying ambulatory clinics.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager; and
  ○ Contractor Integration Architect.
• County Key Resources
  ○ County Project Director; and
  ○ County Project Manager.	

Subtasks/Deliverables	
Subtask 2.1 Validate and Maintain Deployment Strategy Contractor will validate the County established Deployment Strategy. On an ongoing basis, and after each deployment, Contractor will conduct an assessment of the Deployment Strategy. Contractor will: • Validate the Deployment Strategy against the staffing and support model, data conversion model, and training plan; • Conduct assessment to identify risks and issues related to the deployment; • Provide recommendations for addressing risks and issues; and • Provide written recommendations regarding changes to the Deployment Strategy. Contractor will review the Deployment Strategy with County. Contractor will incorporate all relevant changes into applicable Project Control Documents, which result from County-Approved changes to the	**Deliverable 2.1 Deployment Strategy** • Input into Deployment Strategy. • Updated Deployment Strategy. **Acceptance Criteria** • County-Approved Deployment Strategy.

Task 2 Validate and Maintain Deployment Strategy	
Deployment Strategy.	

Task 3 Conduct Deployment Preparation	
Task Description	
Contractor will conduct general deployment preparations for all deployments. The general deployment preparations will include development of Go-Live Go/No-Go Decision Framework and Processes, Backfill Staffing Procedures, Go-Live Event Staffing and Support Model, conduct deployment strategy assessment, Go-Live help Desk Scripts, Operations and Administration Procedures for deployment, and the Deployment and Project Close-out Checklist.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Learning Consultant ("**ACE**");
  ○ Contractor Technical Engagement Leader;
  ○ Contractor Hosting Services Engagement Leader; and
  ○ Contractor AMS Engagement Leader.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Help Desk Analyst; and
  ○ County Technical Manager.	

Subtasks/Deliverables	

Subtask 3.1 Develop Go-Live Go/No-Go Decision Framework and Processes
Contractor will provide a Go-Live Go/No-Go Decision Framework and Processes document which includes:
• Definition of criteria for Go/No-Go decision;
• Description of the Go/No-Go decision process;
• Description of Go/No-Go governance (roles and responsibilities, escalation process, etc.);
• Description of AMS involvement in Go/No-Go decision; and
• Go/No-Go checklist including:
  ○ Location readiness assessment;
  ○ Solution readiness assessment ; and
	Deliverable 3.1 Go-Live Go/No-Go Decision Framework and Processes
	• Go-Live Go/No-Go Decision Framework and Processes document.
	
	Acceptance Criteria:
	• The Go-Live Go/No-Go Decision Framework and Processes document incorporates, and is consistent with, County-provided input.
	• The Go-Live Go/No-Go Decision Framework and Processes document has been Approved by County.

Task 3 Conduct Deployment Preparation	
○ Technical readiness assessment. Contractor will review the Go-Live Go/No-Go Decision Framework and Processes document with County. Contractor will incorporate County feedback and proposed changes into the Go-Live Go/No-Go Decision Framework and Processes document and submit a final version to County for Approval.	
Subtask 3.2 Develop Backfill Procedures Contractor will provide County personnel Backfill Staffing Procedures document which include recommendations and Best Practices regarding: ● Backfill staffing model during training and deployment; ● Approach for scheduling backfill staff; and ● Cross training approach for County and Contractor deployment resources. Contractor will review the Backfill Staffing Procedures document with County and submit to County for Approval.	**Deliverable 3.2 Backfill Procedures** ● Backfill Staffing Procedures document. **Acceptance Criteria:** ● The Backfill Staffing Procedures document incorporates, and is consistent with, County-provided input. ● The Backfill Staffing Procedures document has been Approved by County.
Subtask 3.3 Develop Go-Live Event Staffing and Support Model Contractor will provide a Go-Live Event Staffing and Support Model based upon Contractor experience and Best Practices, including: ● Roles of Contractor and County support teams including super users, Project consultants, clinicians, end-users and Advancing Conversion Excellence Team ("**ACE Team**"). (Contractor's use of the ACE Team in its implementations represents an emerging best practice that is atypical of Contractor's standard implementations. Notwithstanding the foregoing, Contractor has provided ACE Team conversion resources within the Implementation Services, and has estimated the appropriate amount of those Services for the County to be five hundred and twenty-six (526), twelve (12) hour shifts. Based on the circumstances existing prior to deployment of the ACE Team at each Cluster, Contractor, in	**Deliverable 3.3 Go-Live Event Staffing and Support Model** ● Go-Live Event Staffing and Support Model. **Acceptance Criteria:** ● The Go-Live Event Staffing and Support Model has been Approved by County.

Task 3 Conduct Deployment Preparation	

its sole discretion, will validate that its estimate of the ACE Team resources is appropriate for the needs of the County and determine whether an adjustment is needed in light of its Implementation Service obligations under this Agreement. If the County requires additional ACE Team resources beyond the greater of (i) five hundred and twenty-six (526), twelve (12) hour shifts, or (ii) Contractor's validated amount, then County must Approve such Services as Optional Work).
• County and Contractor staffing requirements and support staff ratios for Go-Live central command center, satellite command facilities, if any, and on the floor, including metrics for determination of support staff to user ratios;
• Issue management process including issue communication and issue resolution;
• Contractor's requirements and processes for Contractor Personnel access to County facilities, accommodating County policies and timelines (e.g., for LiveScan, health clearances, ID badges);
• Support model logistics, including:
  ○ Hotline to Contractor; and
  ○ Shift change processes for Contractor and County resources.
• Required training and support materials for Contractor resources;
• County infrastructure and facilities required to support Contractor and County personnel during Go-Live;
• Approach to determine duration of Contractor on-site support staff;
• Transition-out criteria and transition-out process for Contractor on-site support staff;
• Requirements for central and facility based command center location, infrastructure, communications procedures, and issue management; and	

Task 3 Conduct Deployment Preparation	
• Identification of criteria for transitioning support to maintenance and operations support in accordance with Exhibit A.24 (Maintenance and Operations Statement of Work). Contractor will review the Go-Live Event Staffing and Support Model with County. Contractor will incorporate County feedback and proposed changes into the Go-Live Event Staffing and Support Model and submit a final version to County for Approval.	
Subtask 3.4 Develop Go-Live Help Desk Scripts Contractor will support County in the creation of Go-Live Help Desk Scripts by providing sample help desk scripts and tip sheets, including: • County and Contractor roles and responsibilities related to provisioning of Go-Live help desk support; • Procedures for logging and tracking issues; and • Procedures for handing off tickets from Contractor to County for resolution (including closure of tickets and related communications). Contractor will review the County developed Go-Live Help Desk Scripts with County and provide written recommendations for improvement after each deployment.	**Deliverable 3.4 Go-Live Help Desk Scripts** • Go-Live Help Desk Scripts. **Acceptance Criteria:** • The Go-Live Help Desk Scripts incorporate, and are consistent with, County-provided input. • The Go-Live Help Desk Scripts have been Approved by County.
Subtask 3.5 Develop Operations and Administration Procedures Related to the Deployment Contractor will provide an Operations and Administration Procedures document that will be used for each deployment, including: • Implications for operations based on data conversion considerations (appointments, planned orders, instructions for last orders, scheduling of orders post Go-Live, etc.); • Change control process during deployment, including code freezes at prior deployments and production environment change authorization ("**PECA**") process;	**Deliverable 3.5 Operations and Administration Procedures Related to the Deployment** • Operations and Administration Procedures document. **Acceptance Criteria:** • The Operations and Administration Procedures document incorporates, and is consistent with, County-provided input. • The Operations and Administration Procedures document has been Approved by County.

Task 3 Conduct Deployment Preparation	
• Downtimes during deployment; • Communications protocols that Contractor and County IT personnel will use to inform County personnel of important Go-Live events and issues (e.g., automated messages, offline, Project website); • Operations documentation (e.g., batch schedule, runtime procedures); • Guidelines to determine what will be the impact on patient and personnel scheduling; and • Guidelines to determine impacts on productivity. Contractor will review the Operations and Administration Procedures document with County. Contractor will incorporate County feedback and proposed changes into the Operations and Administration Procedures document and submit a final version to County for Approval. Contractor will update the Operations and Administration Procedures document after each deployment to address the specific needs of the upcoming deployment and to include lessons learned from prior deployments.	
Subtask 3.6 Develop Deployment and Project Close-out Checklist Contractor will provide a Deployment and Project Close-out Checklist. In addition, Contractor will provide an overall Project Close-out checklist, which will be used for each deployment. The checklists will include: • System tuning activities; • Completion of knowledge transfer to County support resources; • Timing of archival of MethodM Online (transfer project artifacts to Project repository); • Lessons learned document; • All design documents updated to reflect Go-Live build;	**Deliverable 3.6 Deployment and Project Close-out Checklist** • Deployment and Project Close-out Checklists. **Acceptance Criteria:** • The Deployment and Project Close-out Checklists incorporate, and are consistent with, County-provided input. • The Deployment and Project Close-out Checklists have been Approved by County.

Task 3 Conduct Deployment Preparation	
• Transition of support activities to County where applicable; • Completion of all tasks and Deliverables in Exhibits A.1 – A.23; • County self-sufficiency in logging issues into AMS Services; • Closing of all deployment and Project issue logs and transition remaining issues to Contractor production support; and • Completion of performance verification report. Contractor will review the Deployment and Project Close-out Checklist with County. Contractor will incorporate County feedback and proposed changes into the Deployment and Project Close-out Checklist and submit a final version to County for Approval. Contractor will update the Deployment and Project Close-out Checklist after each deployment to include lessons learned from prior deployments.	

Subtask 3.7 Develop Solution Readiness Framework
Contractor will develop a Solution Readiness Framework that will allow Contractor and County to assess Go-Live readiness from a functional, technical, and location specific perspective.
The Solution Readiness Framework will include:
• Functional readiness assessment framework, including:
  ○ Status of Licensed Software solution;
  ○ Plan for resolution of remaining issues;
  ○ Production Support Plan;
  ○ Scheduled Downtime Plan;
  ○ Help desk infrastructure;
  ○ Help desk staff readiness; and
  ○ Communication with deployment team and AMS.
• Technical readiness framework will include:
  ○ Guidelines for County assessment of
	Deliverable 3.7 Solution Readiness Framework
	• Solution Readiness Framework.
	
	Acceptance Criteria:
	• The Solution Readiness Framework incorporates, and is consistent with, County-provided input.
	• The Solution Readiness Assessment Framework has been Approved by County.

Task 3 Conduct Deployment Preparation	
County infrastructure; ○ Hosting infrastructure, including Hardware and Hosting Software; ○ Revision Management Plan; ○ System Backup/Restore Plan; ○ System Security Plan; ○ Fall-back Procedures; and ○ System Performance Monitoring Plan. • Location readiness assessment framework for deployment to each Domain, Venue, and Location, including: ○ Approach and staffing for transition of support to County support personnel and AMS Services; ○ Data conversion; ○ Deployment backfill; ○ Production support plan; and ○ User proficiency. Contractor will review Solution Readiness Framework with County and incorporate County feedback and proposed changes into Solution Readiness Framework and submit a final version to County for Approval. Contractor will update Solution Readiness Framework prior to each deployment to include findings and lessons learned from prior deployments.	

Task 4 Conduct Readiness Assessments
Task Description
Contractor will conduct a Solution Readiness Assessment, which includes a Technical Readiness Assessment, a Functional Readiness Assessment, and a Location Readiness Assessment for the Licensed Software, the Hosting Services, and the AMS Services for all Domains, Venues, and Locations.
Personnel Requirements
• Contractor Key Resources ○ Contractor Project Director; ○ Contractor Project Manager; ○ Contractor Integration Architect; ○ Contractor Solution Architects; ○ Contractor Delivery Consultants;

Task 4 Conduct Readiness Assessments	
○ Contractor Interface Architect; ○ Contractor Clinical Strategist; ○ Contractor Technical Engagement Leader; ○ Contractor Hosting Services Engagement Leader; ○ Contractor Hosting Services Network Engineer; and ○ Contractor AMS Engagement Leader. ● County Key Resources ○ County Project Director; ○ County Project Manager; ○ County Technical Manager; ○ County Deployment SOW Lead; ○ County Interface Manager; ○ County Technical Manager; ○ County Network Manager; ○ County Desktop Analysts; and ○ County Help Desk Analysts.	
Subtasks/Deliverables	
Subtask 4.1 Conduct Technical Readiness Assessment Contractor will conduct a Technical Readiness Assessment in accordance with the framework developed in subtask 3.7 (Develop Solution Readiness Framework). Contractor will document and review the Technical Readiness Assessment with County and: ● Provide recommendations for changes based on the results from the Technical Readiness Assessment. ● Identify systemic issues that could inhibit County from achieving a sufficient level of readiness (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). ● Provide additional resources to address issues and recommendations above (the resources are to be determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work). Contractor will incorporate County feedback and proposed changes into the Technical Readiness	**Deliverable 4.1 Technical Readiness Assessment** ● Technical Readiness Assessment report. **Acceptance Criteria:** ● The Technical Readiness Assessment report incorporates, and is consistent with, County-provided input. ● The Technical Readiness Assessment report has been Approved by County.

Task 4 Conduct Readiness Assessments	
Assessment report and submit a final version to County for Approval. Contractor will update Technical Readiness Assessment prior to each deployment.	
Subtask 4.2 Conduct Functional Readiness Assessment Contractor will conduct a Functional Readiness Assessment in accordance with the framework developed in subtask 3.7 (Develop Solution Readiness Framework). Contractor will document and review the Readiness Assessment with County and: • Provide recommendations for changes based on the results from the Functional Readiness Assessment. • Identify systemic issues that could inhibit County from achieving a sufficient level of readiness (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional resources to address issues and recommendations above (the resources are to be determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work). Contractor will document Functional Readiness Assessment outcomes and will submit final versions to County for Approval. Contractor will complete Functional Readiness Assessment prior to each deployment.	**Deliverable 4.2 Functional Readiness Assessment** • Functional Readiness Assessment. **Acceptance Criteria:** • The Functional Readiness Assessment incorporates, and is consistent with, County-provided input. • The Functional Readiness Assessment has been Approved by County.
Subtask 4.3 Conduct Location Readiness Assessment Contractor will conduct the Location Readiness Assessment in accordance with the framework developed in subtask 3.7 (Develop Solution Readiness Framework). Contractor will document and review the Location Readiness Assessment with County and: • Provide recommendations for changes based	**Deliverable 4.3 Location Readiness Assessment** • Location Readiness Assessment. **Acceptance Criteria:** • Tests for the Location Readiness Assessment are complete. • The Location Readiness Assessment incorporates, and is consistent with, County-

Task 4 Conduct Readiness Assessments	
on the results from the Location Readiness Assessment. • Identify systemic issues that could inhibit County from achieving a sufficient level of readiness (e.g., time management, complexity, data quality, training issues) and provide County with recommendations for addressing them (e.g., through additional training, augmenting resources). • Provide additional command center resources to address issues and recommendations above (the resources are to be determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work). Contractor will incorporate County feedback and proposed changes into the Location Readiness Assessment and submit a final version to County for Approval.	provided input. • The Location Readiness Assessment has been Approved by County.

Task 5 Conduct Production Cutover Planning
Task Description
Contractor will develop a Production Cutover Plan that will be used for the first Go-Live and refined for subsequent deployments to each Cluster. It will identify the steps required to perform all activities required as part of the production cutover process, including the steps necessary for loading existing and manual data, and the steps that will need to be followed by the Contractor and County for activating the successfully tested Licensed Software, Third-Party Products, Hosting Services, and Interfaces.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Technical Engagement Leader;
  ○ Contractor Integration Architect;
  ○ Contractor Solution Architects;
  ○ Contractor Interface Architect;
  ○ Contractor Delivery Consultants; and
  ○ Contractor Clinical Strategist.
• County Key Resources
  ○ County Project Director;

Task 5 Conduct Production Cutover Planning	
○ County Project Manager; ○ County SOW Leads; ○ County Interface Manager; and ○ County Technical Manager;	
Subtasks/Deliverables	
Subtask 5.1 Develop Production Cutover Plan Contractor will develop and maintain a Production Cutover Plan, including: • Task list and timeline; • Logical order of cutover activities (interdependencies between tasks); • Owner, backup owner; • Start time, check points, end time; • Interdependencies; • Preconditions; • Cross task communication; • County and Contractor resources required for production cutover; • County and Contractor roles and responsibilities; • PECA process during Go-Live; • Go-Live checklist; and • Processes, policies, and procedures for AMS Services. Contractor will conduct a review session of the Production Cutover Plan. Contractor will incorporate County feedback and proposed changes into the Production Cutover Plan and submit a final version to County for Approval. Contractor will track status of Production Cutover Plan development and escalate any issues through the governance process. Contractor will update the Production Cutover Plan for each deployment, including items specific to the deployment being planned, and incorporating lessons learned from prior deployments.	**Deliverable 5.1 Production Cutover Plan** • Production Cutover Plan. **Acceptance Criteria:** • The Production Cutover Plan incorporates, and is consistent with, County-provided input. • The Production Cutover Plan has been Approved by County.

Task 5 Conduct Production Cutover Planning	

Subtask 5.2 Develop Emergency Roll-back Plan
Contractor will develop the Emergency Roll-back Plan which includes:
• Approach for documenting patient records during initial rollout (manual notes, parallel data entry);
• Rollback procedure should they be necessary, including when and how they should be invoked including:
  ○ System for classifying the severity of problems;
  ○ Description of which levels warrant roll-back; and
  ○ Decision-making process for activating Emergency Roll-back Plan; and
• Documented procedures for recovering from roll-back.
Contractor will review the Emergency Roll-back Plan with County.
Contractor will incorporate County feedback and proposed changes into the Emergency Roll-back Plan and submit a final version to County for Approval.
Contractor will update the Emergency Roll-back Plan for each deployment, including items specific to the deployment being planned, and incorporating lessons learned from prior deployments.
	Deliverable 5.2 Emergency Roll-back Plan
	• Emergency Roll-back Plan.
	
	Acceptance Criteria:
	• The Emergency Roll-back Plan incorporates, and is consistent with, County provided input.
	• The Emergency Roll-back Plan has been Approved by County.

Subtask 5.3 Conduct Go-Live Go/No-Go Meetings Contractor will coordinate Go-Live Go/No-Go meetings in accordance with the Production Cutover Plan. Contractor will conduct Go-Live Go/No-Go meetings as jointly determined with County. The meetings will include: • Confirmation of the status of all criteria on the Go/No-Go checklist (e.g., site readiness, operational readiness, any relevant test results); • Reviews of all readiness assessments; and	**Deliverable 5.3 Go-Live Go/No-Go Meetings** • Go-Live Go/No-Go meetings. • Status of all Go-Live checklist criteria. **Acceptance Criteria:** • Go-Live Go/No-Go meetings are held in accordance with Go/No-Go Decision Framework and Processes as determined in subtask 3.1 (Develop Go-Live Go/No-Go Decision Framework and Processes). • Reported status of all criteria on Go/No-Go checklist accurately reflects readiness and test results.

Task 5 Conduct Production Cutover Planning	
• Confirmation of Go/No-Go decision in accordance with Go/No-Go decision process and governance.	

Task 6 Initiate Hosting Services for Production Environment	
Task Description	
Contractor will initiate Hosting Services for Production Environment in accordance with the Specifications. The Hosting Services for Production Environment will include documentation of account management, operations and administration, database administration, change management, capacity management, performance management, and Service Level monitoring and reporting.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor Hosting Services System Engineer;
  ○ Contractor Hosting Services Network Engineer;
  ○ Contractor Technical Engagement Leader; and
  ○ Contractor AMS Services Engagement Leader.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Technical Manager;
  ○ County Network Manager; and
  ○ County Technical Manager.	

Subtasks/Deliverables	
Subtask 6.1 Initiate Remote Hosting Services for Production Environment Contractor will initiate Hosting Services in accordance with the Hosting Services Plan developed in Exhibit A.24 (Maintenance and Operations) and the Production Cutover Plan developed in subtask 5.1 (Develop Production Cutover Plan). The Hosting Services will comply with the requirements of Exhibit N (Required Remote Hosting Services Terms and Conditions), Exhibit N.1 (Hosting Services), Exhibit E (Service Levels and Performance Standards), and the Agreement.	**Deliverable 6.1 Remote Hosting Services for Production Environment** • Hosting Services for production environment initiated. **Acceptance Criteria:** • Hosting Services comply with Specifications. • Hosting Services have been Approved by County.

Task 7 Conduct Cutover Simulation	
Task Description	
As defined in the Production Cutover Plan (subtask 5 of this SOW), Cutover test will be conducted and documented. For identified issues, corrective actions will be incorporated into a revised Production Cutover Plan.	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Delivery Consultants;
  ○ Contractor Solution Architects;
  ○ Contractor Hosting Services Engagement Leader; and
  ○ Contractor AMS Services Engagement Leader.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Leads;
  ○ County Interface Manager;
  ○ County Desktop Technicians;
  ○ County Network Manger; and
  ○ County Technical Manager.	

Subtasks/Deliverables	
Subtask 7.1 Conduct Cutover Simulation Contractor will support County in developing cutover simulation scenarios which will include Integration Test scripts and additional cutover simulation specific test scenarios. Contractor will provide County with requirements to set up a simulation environment (i.e., test room and test bed) with all hardware to walk through test scenarios and conduct end-to-end simulation of: • Workstations and devices; • Data conversion (manual processes); • Interfaces; and • Workflows. Contractor will assist County in conducting cutover simulation (i.e., testing of processes on current systems and Licensed Software and	**Deliverable 7.1 Cutover Simulation Conducted and Documented** • Simulation environment setup requirements. • Documented outcomes of cutover simulation. • Updated Production Cutover Plan. **Acceptance Criteria:** • Cutover simulation outcomes Approved by County. • Updated Production Cutover Plan incorporates, and is consistent with, County-provided input. • The Production Cutover Plan has been Approved by County.

Task 7 Conduct Cutover Simulation	
Third-Party Products). Contractor will conduct timing of cutover simulation to estimate downtime requirements during cutover. Contractor will document the outcomes of the cutover simulation and submit to County for Approval. Contractor will provide recommendations for revisions to the Production Cutover Plan based on cutover testing. Contractor will review recommendations with County and incorporate Approved changes into the Production Cutover Plan.	

Task 8 Deploy Licensed Software and Third-Party Products
Task Description
Contractor and County will iteratively deploy Licensed Software and Third-Party Products in accordance with the deployment strategy and cutover plan. Deployment will include cutover to Licensed Software and Third-Party products, data conversion (including catch-up transactions), activation of interfaces, providing Go-Live support, issue resolution, and conducting Post-Go-Live assessment.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architects;
  ○ Contractor ACE Resources;
  ○ Contractor Additional Command Center Staff, (duplicates of rolls for night shift);
  ○ Contractor Interface Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Technical Engagement Leader;
  ○ Contractor Hosting Services Engagement Leader;
  ○ Contractor AMS Engagement Leader;
  ○ Contractor Hosting Services System Engineer;
  ○ Contractor Hosting Services Network Engineer; and
  ○ Contractor Delivery Consultants.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Leads;

Task 8 Deploy Licensed Software and Third-Party Products	
○ County SMEs; ○ County Super Users; ○ County End Users; ○ County Interface Manager; ○ County Network Manager; ○ County Desktop Technicians; ○ County Help Desk Analysts; and ○ County Technical Manager.	
Subtasks/Deliverables	
Subtask 8.1 Conduct Deployment Contractor will deploy Licensed Software to the Clusters. Contractor will: • Implement the Production Cutover Plans; • Track and monitor progress; and • Identify, escalate, and resolve issues. Recommend adjustments to deployment and Production Cutover Plans as necessary.	**Deliverable 8.1 Successful Deployment to each Cluster identified in Exhibit U (Clusters), including:** • Harbor-UCLA Inpatient deployment; • LAC-USC Inpatient deployment; • Olive View Inpatient deployment; • Rancho Los Amigos Inpatient deployment; • Harbor-UCLA Outlying and Hospital Based Ambulatory Clinics deployment; • High Desert Outlying and MACC Based Ambulatory Clinics deployment; • LAC-USC Outlying and Hospital Based Ambulatory Clinics deployment; • MLK Outlying and MACC Based Ambulatory Clinics deployment; • Olive View Outlying and Hospital Based Ambulatory Clinics deployment; and • Rancho Los Amigos Hospital Based Ambulatory Clinics deployment. **Acceptance Criteria:** • Each Cluster deployment has been Accepted by County.

Task 9 Provide Post-Deployment Support
Task Description
Contractor's post-deployment support team will monitor the deployed system and user activity, assign resources to resolve issues, detect and escalate issues, and resolve and communicate resolution.

Task 9 Provide Post-Deployment Support	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Solution Architect;
  ○ Contractor Interface Architect;
  ○ Contractor AMS Engagement Leader
  ○ Contractor Hosting Services Production Owner Technical Manager;
  ○ Contractor Hosting Services Production Owner System Engineer; and
  ○ Contractor Delivery Consultants.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager;
  ○ County Interface Manager;
  ○ County Technical Manager;
  ○ County Help Desk Analysts;
  ○ County SOW Team Leads; and
  ○ County SMEs.	

Subtasks/Deliverables	
Subtask 9.1 Provide Post Go-Live Support Contractor will track deployment status and resolve issues by: • Working with County to track deployment status, and identify and escalate issues; • Assigning appropriate resources to resolve issues; • Communicating issue resolution; and • Providing additional resources to the address issues and recommendations above (the resources are to be as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work). Contractor will track progress on achieving exit criteria. Contractor will regularly assess the status of the deployment prior to the end of the support period. Contractor will provide Post-Go Live support until exit criteria are achieved.	**Deliverable 9.1 Post Go-Live Support** • Issues identified, escalated, and resolved by Contractor. • Issue resolution communicated to County. **Acceptance Criteria:** • Post-Go Live exit criteria achieved.

Task 9 Provide Post-Deployment Support	
Subtask 9.2 Transition to Application Management Services Contractor Project team will coordinate transition to AMS Services upon achieving exit criteria. Contractor AMS Services staff will alert County Workgroups of issues and risks related to the County build. Prior to the first deployment, Contractor's transition team will develop processes, policies, and procedures for AMS Services. Contractor will initiate AMS Services to include: • Application management and monitoring; • 24x7x365 application support; • Operations management; • Report creation and maintenance; • Maintenance checks; • Licensed Software configuration requests; • Incident/problem management; • Revisions, New Releases and Licensed Software Upgrades; • Content management; • Service Level monitoring and reporting; • Change management; • Application configuration management; • Interface support; and • Authorization controls and processes. Contractor will review the processes, policies, and procedures for AMS Services with County. Contractor will incorporate County feedback and proposed changes into the processes, policies, and procedures for AMS Services and submit a final version to County for Approval.	**Deliverable 9.2 Application Management Services** • AMS Services staff participation in Design Review and System Validation phases of Exhibits A.4 – A.18. • Successful transition to AMS Services. **Acceptance Criteria:** • County transitioned to steady state maintenance and support (AMS Services and County help desk).
Subtask 9.3 Conduct Post Go-Live Assessment After each deployment, Contractor will conduct a post Go-Live Assessment with County input, including: • User interviews; and	**Deliverable 9.3 Post Go-Live Assessment** • Post Go-Live Assessment reports. **Acceptance Criteria:** • The Post Go-Live Assessment reports

Task 9 Provide Post-Deployment Support	
• Written report of findings with Contractor advice and recommendations to enhance benefits to County of Licensed Software use. Contractor will review the Post Go-Live Assessment reports with County. Contractor will incorporate County feedback and proposed changes into the Post Go-Live Assessment reports and submit a final version to County for Approval.	incorporate, and are consistent with, County-provided input; and • The Post Go-Live Assessment reports have been Approved by County.

Task 10 Conduct Performance Verification and Provide Performance Verification Report	
Task Description	
After each deployment, Contractor will diagnose, propose solutions to, and correct Errors in accordance with Section 12 (Acceptance) of the Agreement. Contractor will conduct a review session with County after Productive Use of each Cluster and will provide the performance verification report described in Section 12.5.2 (Performance Verification Report) of the Agreement	
Personnel Requirements	

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Hosting Services Production Owner Technical Engagement Leader;
  ○ Contractor Hosting Services Production Owner System Engineer;
  ○ Contractor Hosting Services Engagement Leader; and
  ○ Contractor AMS Services Engagement Leader.
• County Key Resources
  ○ County Project Director;
  ○ County Project Manager; and
  ○ County Technical Manager.	

Subtasks/Deliverables	
Subtask 10.1 Conduct Performance Verification Activities After each deployment, Contractor will perform all performance verification activities required by the Agreement. Contractor will develop a performance verification report which includes: • Summary of activities, results, and outcomes; • Summary of Errors and issues identified by Contractor or County;	**Deliverable 10.1 Performance Verification Activities** • Diagnosis and resolution of Errors in accordance with the Agreement. • Review sessions after Productive Use of each Cluster. • Performance verification reports. **Acceptance Criteria:**

• Summary of lessons learned; • Recommendations for any improvements of the deployment methodology, including specific suggestions for modification of Project planning documents; • Recommendations for process changes to improve the effectiveness of the Productive Use; • Recommendations for any improvements of the Licensed Software; and • Confirmed compliance with Service Levels specified in Exhibit E (Services Levels) to the Agreement. Contractor will conduct review sessions with County after Productive Use of each Cluster and develop a performance verification report. Contractor will incorporate County feedback and proposed changes into the performance verification report and submit a final version to County for Approval. Contractor will incorporate County Approved changes into the Project planning documents.	• Final Acceptance of the License Software. • County-Approved performance verification reports.

Task 11 Develop Final Acceptance Report
Task Description
After Productive Use of the final Cluster, Contractor will notify County when the Licensed Software, Third-Party Products, and Hosting Software has been successfully implemented and is functioning in accordance with the Specifications at each Cluster, and is ready for Acceptance Testing. Contractor will provide County with a Certification of Performance Verification and Final Acceptance in accordance with Section 12.5.3 (Final Acceptance) of the Agreement that includes the performance verification reports for each Cluster prepared in subtask 10.1 (Conduct Performance Verification Activities) and documents the review with County under Section 12.5.2 (Performance Verification Report) of the Agreement.
Personnel Requirements

• Contractor Key Resources
  ○ Contractor Project Director;
  ○ Contractor Project Manager;
  ○ Contractor Integration Architect;
  ○ Contractor Clinical Strategist;
  ○ Contractor Hosting Services Production Owner Technical Engagement Leader; and
  ○ Contractor Hosting Services Production Owner System Engineer.
• County Key Resources
  ○ County Project Director;

Task 11 Develop Final Acceptance Report	
○ County Project Manager; and ○ County Technical Manager.	
Subtasks/Deliverables	
Subtask 11.1 Provide Final Acceptance Report Contractor will provide a Final Acceptance Report which includes: ● Certification of Performance Verification and Final Acceptance; ● Performance verification reports for all Clusters; ● Confirmation that all Clusters are in Productive Use and that critical and high issues are resolved directly or with acceptable workarounds; ● List of all unresolved issues; ● Plan for resolution of unresolved issues; and ● Confirmation of compliance with response times and other Service Levels. Contractor will review the draft Final Acceptance Report with County. Contractor will incorporate County feedback and proposed changes into the Final Acceptance Report and submit a final version to County for Approval.	**Deliverable 11.1 Final Acceptance Deliverable** ● Final Acceptance Report. **Acceptance Criteria:** ● The Final Acceptance Report incorporates, and is consistent with, County-provided input. ● The Final Acceptance Report has been Approved by County. ● Successful completion of County Acceptance Testing. ● Final Acceptance by County.

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work)

to the

Electronic Health Records System and Services Agreement

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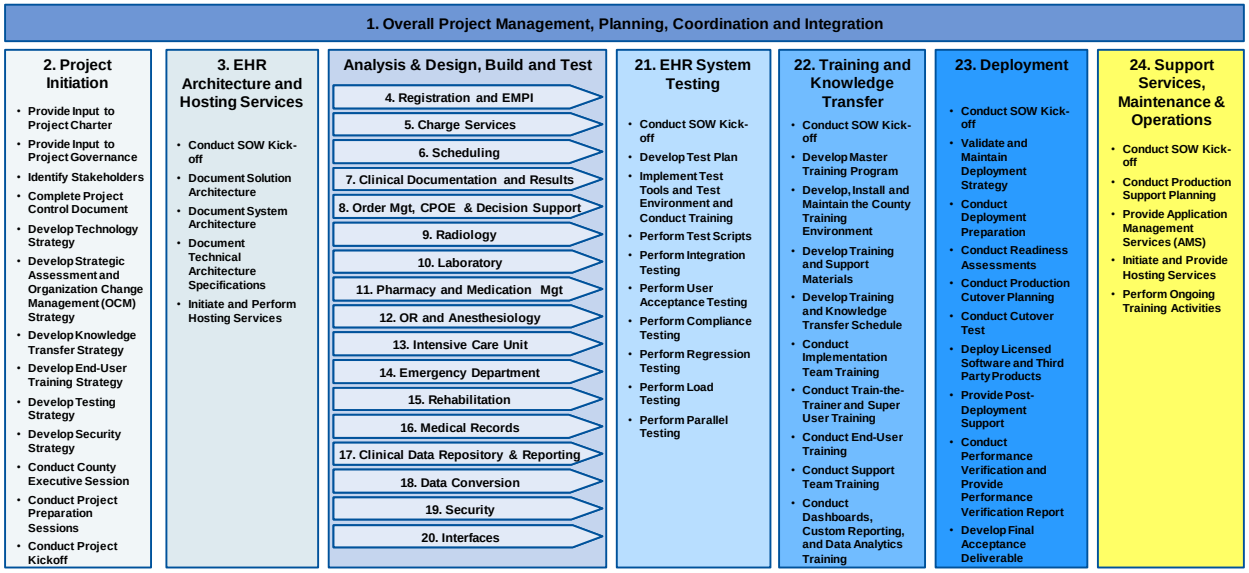
1. Introduction

This Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work (sometimes referred to in this Exhibit as "**this SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement.

All of the all the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services. This SOW aggregates tasks and subtasks that are a subset of both the broad definition of Services set forth in Exhibit G (Glossary) of the Agreement, and the specific Services associated with this SOW. Whether or not additional Services, not specifically included in any SOW, are needed to successfully deliver the EHR System as required under the Agreement, such Services are required to be delivered by Contractor and are included in the Contract Sum.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work). The completion of any phase in a period of time shorter or longer that that specified below shall not increase the Contract Sum.

This is Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work. It is one of a series of twenty four (24) SOWs, which describe all of the key work elements and Deliverables of the Project. The twenty four (24) SOWs are as follows:



2. Business Objectives Supported

This SOW will describe the Services to be delivered and provide the framework which will be used to perform Support Services, Maintenance and Operations for the EHR System.

3. SOW Summary

3.1 Overview

This SOW describes the Support Services, Maintenance, and Operations tasks, subtasks, and Deliverables required to successfully support, maintain and operate the EHR System. It describes the sub-Project Work Plan and initiation session for this sub-Project; production support planning, including Documentation and notification processes; provision of Application Management Services ("**AMS**"); initiation of Hosting Services and management of the Hosting Environment; and ongoing training activities to support the EHR System.

3.2 SOW Team Structure and Resources

Contractor will provide a Project Staffing and Resource Management Plan. This plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy personnel to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor.

3.3 Dependencies with Other SOWs

Contractor acknowledges and accepts that this SOW is one in a series of SOWs, all of which are inter-related, and the performance of which is integral to the overall success of this Project. Deliverables are created in other SOWs, which provide the foundation for this SOW, including but not limited to:

- Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) provides the framework that will be used to manage the overall Project, including this SOW.
- Exhibit A.2 (Project Initiation Statement of Work) provides Deliverables which create the foundation for all SOWs, including this SOW.
- Exhibits A.4 – A.20, the Analysis and Design, Build and Test domains Statements of Work produce the development/build and test environments that are required for this SOW.

3.4 Critical Success Factors

A number of factors are deemed critical to overall Project success. The Parties acknowledge that the following factors are critical to the success of this Project:

Strong Project Management – Effectively managing the Services provided under the Agreement to the Project Schedule and results to be achieved and managing issues, driving decisions, risk, dependencies, and resources in a manner to achieve the Project Schedule and the results.

Open Communication and Governance Structure Clearly Defined – Good and open communication must be established early. Governance, committee structure, and committee members must be defined early. Meeting schedules must also be established for the length of the Project.

Executive Leadership Involvement – It is imperative that executive leadership from Contractor, DHS, and the DHS CIO be involved in the Project governance and meet at regular intervals to discuss the Project's progress and reach agreement on any key decisions that have been escalated to their level.

County Managed Level 1 Help Desk– It is required that County provides an internal Client help desk that serves as the initial point of contact for end users. This function: answers basic system questions, routes

service request to the appropriate parties, and gathers relevant contact information to be logged with the service request.

3.5 Schedule

The commencement date for this Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) will begin upon completion of Exhibit A.2 (Project Initiation Statement of Work) and will continue throughout the Support Term.

Scheduled commencement dates, scheduled completion dates, and anticipated durations for Milestones, including a Key Milestone table, will be developed as part of the Project Control Document. The durations for tasks and subtasks are in the detailed Project Work Plan.

4. General Responsibilities

For the Services described in this SOW:

(1) The Services will be performed by Contractor on-site at sites designated by County and at off-site location(s) as agreed by the Parties in writing for specific activities.

(2) Contractor will provide designated resources to deliver the Services 7x24x365.

(3) Contractor will utilize its MethodM implementation methodology, templates, and other tools as required to support the efficient and cost effective execution of the Services defined in this SOW to the extent MethodM is not inconsistent with the Agreement. This includes use of Contractor's knowledge capital databases and other repositories of deliverables and intellectual capital from previous client experiences.

(4) Contractor will provide all Services in English.

4.1 Contractor Delivery Consultant Responsibilities

Contractor will designate a Contractor Delivery Consultant for this SOW (referred to in this Exhibit as the "**Support Services, Maintenance and Operations Delivery Consultant**" or "**Contractor Delivery Consultant**") to whom all County communications may be addressed and who has the authority to represent and commit Contractor in connection with all aspects of this SOW.

The Contractor Delivery Consultant's obligations include:

(1) Establish and maintain communications through the County SOW Lead and Project governance structure;

(2) Manage the delivery of Services and service interdependencies;

(3) Notify County of any Contractor focal point or contacts for specific activities or tasks;

(4) Manage and maintain the sub-Project Work Plan for this SOW which lists, as appropriate, the activities, tasks, assignments, service interdependencies, Key Milestones and Deliverables, and schedule;

(5) Measure, track and evaluate progress against the Project Schedule;

(6) Work with the County SOW Lead to resolve deviations, if any, from the Project Schedule;

(7) Coordinate and manage the activities of Contractor Personnel;

(8) Report to the County SOW Lead problems and issues impacting Contractor's provision of the Services that require County's attention and resolution;

(9) Coordinate resolution of all Service issues including those raised by the County SOW Lead and, as necessary, escalate such issues within the Contractor organization;

(10) Administer the Project Control Document with the County SOW Lead;

(11) Conduct regularly scheduled Project Status Meetings and prepare weekly Status Reports for the Services defined in this SOW; and

(12) Assist in the preparation and conduct of monthly steering committee updates.

Contractor will perform these activities throughout the provision of the Services.

4.2 Specific County Tasks

4.2.1 County SOW Lead Responsibilities

County will assign a lead for this SOW (referred to in this Exhibit as the "**Support Services, Maintenance, and Operations SOW Lead**" or "**County SOW Lead**"). The County SOW Lead will:

(1) Serve as the primary interface between the Contractor Delivery Consultant and County for the tasks and Deliverables set forth in this SOW;

(2) Review this SOW and the responsibilities of both County and Contractor with the Contractor Delivery Consultant;

(3) Coordinate, manage, and be responsible for the control of the activities of County personnel for this SOW;

(4) Communicate to the Contractor Delivery Consultant any changes that may materially affect Contractor's provision of the Services set forth in this SOW;

(5) Coordinate with Contractor Delivery Consultant on Contractor's efforts to resolve problems and issues related to the Services set forth in this SOW;

(6) Work with the Contractor Delivery Consultant to resolve deviations, if any, from the Project Work Plan related to this SOW;

(7) Coordinate resolution of issues raised by the Contractor Delivery Consultant pertaining to this SOW and, as necessary, escalate such issues within the County organization;

(8) Serve as the interface between Contractor's Project team and all County departments participating in activities for the Services set forth in this SOW;

(9) Notify Contractor of any County focal point or contacts for specific activities or tasks related to this SOW;

(10) Ensure that tasks related to this SOW assigned to personnel within the County organization will be completed according to the timetable in the Project Schedule;

(11) Participate in selected Project Status Meetings with Contractor Project team members and schedule and coordinate attendance and participation of County personnel for interviews, meetings and work sessions related to the completion of this SOW.

County may change the County SOW Lead by providing notification to the Contractor Delivery Consultant with an introduction and handoff meeting to establish plans for a smooth transition.

4.2.2 Other County Responsibilities

County agrees to comply with its responsibilities as described in this SOW. Such obligations are to be performed at no charge to Contractor.

County will:

(1) Provide County standard and available office space, basic office furniture, and access to the Internet supporting VPN for Contractor personnel while working at County's facilities;

(2) Locate Contractor Personnel in an area near County subject matter experts and technical personnel;

(3) Provide necessary security badges and clearances for Contractor Personnel working at County's facilities;

(4) Make available staff with appropriate skills and experience to deliver County tasks as specifically set forth in this SOW.

5. Services and Deliverables

The Services and Deliverables to be provided under this SOW include:

Task/Subtask Name	Deliverables
Task 1 Conduct SOW Kick-off	
Subtask 1.1 Develop Sub-Project Work Plan for Support Services, Maintenance, and Operations	Deliverable 1.1 Sub-Project Work Plan for Support Services, Maintenance, and Operations
Subtask 1.2 Conduct Initiation Session for Support Services, Maintenance, and Operations Workgroup	Deliverable 1.2 Support Services, Maintenance, and Operations Initiation Session
Task 2 Conduct Production Support Planning	
Subtask 2.1 Develop and Maintain Production Support Plan	Deliverable 2.1 Production Support Plan
Subtask 2.2 Compile EHR System and User Documentation for Handover to Production Support	Deliverable 2.2 EHR System and User Documentation
Subtask 2.3 Define Contractor Process for Notifying County of Security Issues	Deliverable 2.3 Contractor Notification Process for Security Issues
Subtask 2.4 Define Contractor Process for Notifying County of Issues and Events impacting Operations	Deliverable 2.4 Contractor Process for Notifying County of Issues and Events Impacting Operations

Task/Subtask Name	Deliverables
Subtask 2.5 Define Requirements for Systems, Tools and Interfaces for IT Service Management	Deliverable 2.5 Requirements for Systems, Tools and Interfaces for IT Service Management (Key Deliverable)
Task 3 Provide Application Management Services	
Subtask 3.1 Establish AMS Delivery Model for County	Deliverable 3.1 AMS Delivery Model for County (Key Deliverable)
Subtask 3.2 Provide Application Monitoring and Management	Deliverable 3.2 Application Monitoring
Subtask 3.3 Provide 24x7x365 Application Support	Deliverable 3.3 24x7x365 Application Support
Subtask 3.4 Provide Operations Management	Deliverable 3.4 Operations Management
Subtask 3.5 Provide Report Creation and Maintenance	Deliverable 3.5 Report Creation and Maintenance
Subtask 3.6 Conduct Maintenance Checks	Deliverable 3.6 Maintenance Checks
Subtask 3.7 Implement Licensed Software Configuration Requests	Deliverable 3.7 Implemented Licensed Software Configuration Requests
Subtask 3.8 Provide Incident/Problem Management and Resolution	Deliverable 3.8 Incident/Problem Management Report
Subtask 3.9 Implement New Releases and Licensed Software Upgrades	Deliverable 3.9 New Releases and Licensed Software Upgrades
Subtask 3.10 Provide Content Management	Deliverable 3.10 Content Management
Subtask 3.11 Conduct Service Level Monitoring and Reporting	Deliverable 3.11 Service Level Monitoring and Reporting
Subtask 3.12 Provide Technology Change Management	Deliverable 3.12 Technology Change Management
Subtask 3.13 Provide Configuration Management	Deliverable 3.13 Configuration Management
Subtask 3.14 Provide Interface Support	Deliverable 3.14 Interface Support
Subtask 3.15 Maintain Security and Manage Authorization Controls and Processes	Deliverable 3.15 Security Services and Authorization Controls
Task 4 Initiate and Provide Hosting Services	
Subtask 4.1 Prepare Hosting Services delivery document	Deliverable 4.1 Hosting Services delivery document (Key Deliverable)
Subtask 4.2 Provide Hosting Services	Deliverable 4.2 Hosting Services

Task/Subtask Name	Deliverables
Subtask 4.3 Conduct Service Level Monitoring and Reporting	Deliverable 4.3 Service Level Reports
Subtask 4.4 Respond to Support Service Requests	Deliverable 4.4 Support Services
Subtask 4.5 Maintain Security	Deliverable 4.5 Security Services
Subtask 4.6 Conduct Backups and Restores	Deliverable 4.6 Backups Validation Report
Subtask 4.7 Provide Business Continuity and Disaster Recovery Services	Deliverable 4.7 Business Continuity and Disaster Recovery
Task 5 Conduct Ongoing Training Activities	
Subtask 5.1 Support Training on Revisions	Deliverable 5.1 Training Support on Revisions
Subtask 5.2 Maintain LearningLIVE Environment	Deliverable 5.2 LearningLIVE Environment and Training

5.1 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverable Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by County. As each Project Deliverable is submitted, Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Section 5.3 (Project Deliverable Expectations Document Template)the Appendix of this SOW.

(2) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverables.

(3) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(4) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(5) Prepare drafts of the Deliverable for County for review.

(6) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(7) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(8) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(9) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(10) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, the County SOW Lead or designee shall notify Contractor Delivery Consultant and assigned Project team resources in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

5.2 Tasks

Contractor shall be responsible for performing the following tasks as to the Services to be provided under this SOW.

Task 1 Conduct SOW Kick-off
Task Description
The team members from Contractor, County, and external stakeholders will be introduced and their specific roles will be described. Support Services, Maintenance, and Operations-specific training on the Licensed Software and Third-Party Products, as used in conjunction with the Licensed Software and EHR System, will be provided for the County personnel working on this SOW (referred to in this Exhibit as the "**County Support Services, Maintenance, and Operations Workgroup**" or "**County Workgroup**" and the County Support Services, Maintenance, and Operations Workgroup will be introduced to various Contractor tools, existing Support Services, Maintenance, and Operations-related artifacts, Support Services, Maintenance, and Operations methodologies, and Best Practices that will be used throughout this SOW.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor AMS Engagement Leader;
  ○ Contractor AMS Engagement Controller;
  ○ Contractor AMS Integration Architect;
  ○ Contractor AMS Solution Architect;
  ○ Contractor AMS Delivery Consultant;
  ○ Contractor AMS Solution Analyst;
  ○ Contractor Hosting Services Service Delivery Manager;
  ○ Contractor Hosting Services Production Owner;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Hosting Services Database Administrator.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;

Task 1 Conduct SOW Kick-off	
○ County SOW Team Leads; ○ County Technical Manager; ○ County Desktop Technicians; ○ County Network Engineers; ○ County Helpdesk Analysts; and ○ County Interface Manager.	
Subtasks/Deliverables	
Subtask 1.1 Develop Sub-Project Work Plan for Support Services, Maintenance, and Operations As part of the Project Control Document, Contractor will develop and maintain an overall Project Work Plan. The Project Work Plan will include a Support Services, Maintenance, and Operations-specific section. The overall Project Work Plan will include a Project Schedule, and will be developed in MethodM Online compatible version of Microsoft Project, which will include: • Deliverables, tasks, and subtasks; • Associated dependencies among Deliverables, tasks, and subtasks both within this SOW and across all related SOWs and work streams; • Resources (effort hours and roles) required for each Deliverable, task, and subtask; • Start date and date of completion for each Deliverable, task, and subtask; • County review period for each Deliverable; • Acceptance Criteria for each Deliverable; and • Milestones and Key Milestones. Contractor will adapt the Support Services, Maintenance, and Operations-specific section of the Project Work Plan to create a specific sub-Project Work Plan which includes timelines, activities, Deliverables, and milestones specific to this Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) and subject to County Approval.	**Deliverable 1.1 Sub-Project Work Plan for Support Services, Maintenance, and Operations** • Support Services, Maintenance, and Operations-specific section of Project Work Plan. • Sub-Project Plan for Support Services, Maintenance, and Operations. **Acceptance Criteria:** • The Support Services, Maintenance, and Operations-specific section of the Project Work Plan incorporates, and is consistent with, County-provided input. • The Support Services, Maintenance, and Operations-specific section of the Project Work Plan addresses all elements described in subtask 1.1 (Develop Sub-Project Work Plan for Support Services, Maintenance, and Operations). • The Support Services, Maintenance, and Operations-specific section of the Project Work Plan has been Approved by County. • Timelines detailed in the Support Services, Maintenance, and Operations-specific section of the Project Work Plan and sub-Project Work Plan are realistically achievable with reasonable effort as determined by County. • Elements of the Support Services, Maintenance, and Operations-specific section of the Project Work Plan are consistent with tasks, subtasks, and Deliverables as outlined in this and other SOWs. • Confirmed availability of Contractor resources required to implement the Support Services, Maintenance, and Operations sub-Project Work Plan.

Task 1 Conduct SOW Kick-off	
Subtask 1.2 Conduct Initiation Session for Support Services, Maintenance, and Operations Workgroup Contractor will conduct a Support Services, Maintenance, and Operations Initiation Session to provide an introduction to the County Workgroup to the Services covered by this SOW, including the timelines and nature of work effort that will be required to implement this SOW. Before the Support Services, Maintenance, and Operations Initiation Session, Contractor will: • Work with County to identify all Contractor and County resources required to complete the tasks outlined in this SOW; • Provide County with a roster of Support Services, Maintenance, and Operations Initiation Session participants; and • Develop a written agenda/schedule for the Support Services, Maintenance, and Operations Initiation Session. The Support Services, Maintenance, and Operations Initiation Session will include the following: • Review and document Support Services, Maintenance, and Operations Services, including Hosting Services and AMS (among others), and Licensed Software Modules and Third Party Products, Domains, Venues, and Locations for which Support Services, Maintenance, and Operations capabilities must be delivered within County. • Review tasks, Deliverables, and Milestones for the planning and initiation of Support Services, Maintenance, and Operations. After the Support Services, Maintenance, and Operations Initiation Session, Contractor will prepare a Support Services, Maintenance, and Operations Initiation Session Event Summary Report for review and Approval by County.	**Deliverable 1.2 Support Services, Maintenance, and Operations Initiation Session** • Support Services, Maintenance, and Operations Initiation Session Materials for County. • Initial list of County Domains, Venues, and Locations for which Support Services, Maintenance, and Operations capabilities must be delivered. • Report documenting Support Services, Maintenance, and Operations SOW dependencies. • List of County Workgroup members who attended the Support Services, Maintenance, and Operations Initiation Session. • List of Assignments and roles associated with those assignments for members of the County Workgroup. • Support Services, Maintenance, and Operations Initiation Session Event Activity Report. • Support Services, Maintenance, and Operations Support Services, Maintenance, and Operations Initiation Session presentation materials. • Support Services, Maintenance, and Operations SOW Initiation Session Event Summary Report. **Acceptance Criteria:** • The Support Services, Maintenance, and Operations Initiation Session Event Summary Report from Contractor documenting that Initiation Session (a) has been completed and (b) includes accurate documentation of the content, outcomes, and next steps agreed upon at the Support Services, Maintenance, and Operations Initiation Session Event. • The Support Services, Maintenance, and Operations Initiation Session Event Summary Report has been Approved by County.

Task 1 Conduct SOW Kick-off	
	• Report documenting Support Services, Maintenance, and Operations SOW dependencies and a plan to identify and address all others as described in subtask 1.2 (Conduct Initiation Session for Support Services, Maintenance, and Operations Workgroup). • Report documenting Support Services, Maintenance, and Operations SOW dependencies has been Approved by County.

Task 2 Conduct Production Support Planning	
Task Description	
Contractor will prepare production support planning documents, including development of a Production Support Plan, definition of Support Services, Maintenance, and Operations Services, communication methods, and delivery of Support Services, Maintenance, and Operations Services.	
Personnel Requirements	

• Contractor Key Employees
  ○ Contractor AMS Engagement Leader;
  ○ Contractor AMS Engagement Controller;
  ○ Contractor AMS Integration Architect;
  ○ Contractor AMS Solution Architect;
  ○ Contractor AMS Delivery Consultant;
  ○ Contractor AMS Solution Analyst;
  ○ Contractor Hosting Services Delivery Manager;
  ○ Contractor Hosting Services Production Owner;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Hosting Services Database Administrator.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Team Leads;
  ○ County Technical Manager;
  ○ County Desktop Technicians;
  ○ County Network Engineers;
  ○ County Helpdesk Analysts; and
  ○ County Interface Manager.	

Subtasks/Deliverables	
Subtask 2.1 Develop and Maintain Production Support Plan Contractor will develop a Production Support	**Deliverable 2.1 Production Support Plan** • Production Support Plan.

Task 2 Conduct Production Support Planning	
Plan that includes a detailed description of: • Contractor-provided Support Services; • AMS Delivery Model; • Hosting Services Delivery Model; • Maintenance of EHR System and user documentation; and • Maintenance of Production Support Plan. Contractor will update the Production Support Plan as required to provide for new Releases, Upgrades, and Revisions. Contractor will review the initial and updated Production Support Plan with County. Contractor will incorporate County feedback and proposed changes into the initial and updated Production Support Plan and submit a final version to County for Approval.	**Acceptance Criteria:** • Production Support Plan addresses all elements described in subtask 2.1 (Develop and Maintain Production Support Plan). • County-Approved Production Support Plan.
Subtask 2.2 Compile EHR System and User Documentation for Handover to Production Support Contractor will develop EHR System and User Documentation that is compatible with County systems and applications, including: • EHR System solution architecture and design documents; • Training materials and user guides as developed in Exhibit A.22 (Training and Knowledge Transfer); • Production Support Plan; and • Help Desk procedures and scripts as developed in Subtask 9.1 (Provide Post Go-Live Support) of Exhibit A.23 (Deployment). Contractor will maintain an archive of the EHR System and user documentation in a shared location accessible to County. Contractor will update the EHR System and User Documentation as needed to ensure complete documentation of all Revisions and other changes. Contractor will review the initial and updated EHR System and User Documentation with County.	**Deliverable 2.2 EHR System and User Documentation** • EHR System and User Documentation. **Acceptance Criteria:** • EHR System and User Documentation addresses all elements described in subtask 2.2 (Compile EHR System and User Documentation for Handover to Production Support). • County-Approved EHR System and User Documentation.

Task 2 Conduct Production Support Planning	
Contractor will incorporate County feedback and proposed changes into the EHR System and User Documentation and submit a final version to County for Approval.	
Subtask 2.3 Define Contractor Process for Notifying County of Security Issues Contractor will define the Contractor process for notifying County of security issues and incidents in accordance with Exhibit K (Information Security Requirements) and Section 20 (Security) of the Agreement, including: • Breaches of Licensed Software, and Contractor systems and databases; • Unauthorized exposure or transmission of County Data held by Contractor; and • Unauthorized physical access to Contractor facilities where County Data is held. Contractor's process for notifying County will include: • Timeline for notifying County of the security issue; • Method of notifying County; • County recipient of Contractor notifications; and • Contractor Personnel responsible for notifying County. Contractor will, with input from County, define levels of severity for security issues and incidents. Contractor will review the Security Issues and Incidents Notification Processes with County. Contractor will incorporate County feedback and proposed changes into the Security Issues and Incidents Notification Processes and submit a final version to County for Approval.	**Deliverable 2.3 Contractor Notification Process for Security Issues** • Contractor Security Issues and Incidents Notification Processes. **Acceptance Criteria:** • Contractor Security Issues and Incidents Notification Processes address all elements described in subtask 2.1 (Define Contractor Process for Notifying County of Security Issues). • Contractor Security Issues and Incidents Notification Processes have been Approved by County.
Subtask 2.4 Define Contractor Process for Notifying County of Issues and Events Impacting Operations Contractor will define Contractor processes for notifying County of issues, events, incidents, and problems impacting operations, including: • Issue, event, incident, and problem types and	**Deliverable 2.4 Contractor Process for Notifying County of Issues and Events Impacting Operations** • Contractor processes for notifying County of issues, events, incidents, and problems impacting operations.

Task 2 Conduct Production Support Planning	
severity definitions; • Contractor required maintenance windows and downtimes, including Contractor's scheduled outages in accordance with Section 7.1 (Scheduled Outages) of Exhibit E (Services Levels and Performance Standards); • County required maintenance windows and downtimes; • Timeline for notifying County of issues, events, incidents, and problems based on severity; • Method of notifying County; • County recipient of notification; and • Contractor Personnel responsible for notifying County. Contractor will review with County the Contractor processes for notifying County of issues, events, incidents, and problems impacting operations. Contractor will incorporate County feedback and proposed changes into Contractor's processes for notifying County of issues, events, incidents, and problems impacting operations and submit a final version to County for Approval.	**Acceptance Criteria:** • County-Approved Contractor processes for notifying County of issues, events, incidents, and problems impacting operations.
Subtask 2.5 Define Requirements for Systems, Tools, and Interfaces for IT Service Management Contractor will work with County to define and document Requirements for Systems, Tools, and Interfaces for IT Service Management, including: • Help Desk Ticketing system to be use by County and AMS for issues and requests (current County system is Numara Footprints); • Tools and methods for County to access and view performance data related to AMS and Hosting Services; • Interface requirements necessary to intercommunicate between County service management and monitoring systems and Contractor service management and monitoring systems; and • Technical specifications which County can use	**Deliverable 2.5 Requirements for Systems, Tools and Interfaces for IT Service Management** • Requirements for Systems, Tools, and Interfaces for IT Service Management. **Acceptance Criteria:** • County-Approved Requirements for Systems, Tools and Interfaces for IT Service Management.

Task 2 Conduct Production Support Planning	
to interface County service management and reporting tools to Contractor service management tools if they are distinct and this is necessary. Where applicable, Contractor will provide County with recommendations for tools. Contractor will review and incorporate County feedback and proposed changes into Requirements for Systems, Tools and Interfaces for IT Service Management and submit a final version to County for Approval.	

Task 3 Provide Application and System Management Services
Task Description
Contractor will provide Application Management Services ("**AMS**") for the Term of the Agreement. Contractor will provide AMS Services as provided in the Agreement, including, as applicable, the SOWs. Contractor will establish an AMS delivery model ("**AMS Delivery Model**") for County and deliver AMS in accordance with the Agreement and this SOW 24 (Support Services, Maintenance and Operations). County use of and requests for AMS Services, including those described in this Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) will be unlimited in nature and County's use of the AMS Services will not affect the Contract Sum.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor AMS Engagement Leader;
  ○ Contractor AMS Engagement Controller;
  ○ Contractor AMS Integration Architect;
  ○ Contractor AMS Solution Architect;
  ○ Contractor AMS Delivery Consultant;
  ○ Contractor AMS Solution Analyst;
  ○ Contractor Meaningful Use Consultant;
  ○ Contractor Hosting Services Service Delivery Manager;
  ○ Contractor Hosting Services Production Owner;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Hosting Services Database Administrator.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Team Leads;
  ○ County Technical Manager;
  ○ County Desktop Technicians;
  ○ County Network Engineers;
  ○ County Helpdesk Analysts; and
  ○ County Interface Manager.

Task 3 Provide Application and System Management Services	
Subtasks/Deliverables	

Subtask 3.1 Establish AMS Delivery Model for County
Contractor will develop an AMS Delivery Model, including:
○ Description of AMS Services as listed in subtasks 3.2 – 3.15 of this SOW;
○ Develop, provide, and update Contractor staffing model for each AMS service, Licensed Software Module, and Third-Party Product;
○ Contractor and County roles and responsibilities for AMS Services;
○ AMS Services governance model for interaction with County;
○ Approach to ensure continuity and knowledge transfer as AMS Services resources change;
○ Service Level requirements;
○ Reporting frequency and method, including approach for updating changes as metrics, requirements, and applications evolve;
○ Scheduling approach and County review for maintenance windows;
○ Approach for Regression Testing, including:
  ○ Selection/development of Regression Test scripts;
  ○ Testing process; and
  ○ Testing exit criteria;
• Methodology for review and updating AMS Delivery Model; and
• Process for issue resolution.
Throughout the Term, Contractor will maintain, and may update, the AMS Delivery Model.
Contractor will review the AMS Delivery Model with County.
Contractor will incorporate County feedback and proposed changes into the County-specific AMS Delivery Model and submit a final version to County for Approval.
	Deliverable 3.1 AMS Delivery Model for County
	○ AMS Delivery Model.
	Acceptance Criteria:
	• AMS Delivery Model addresses all elements described in subtask 3.1 (Establish AMS Delivery Model for County).
	○ AMS Delivery Model has been Approved by County.

Task 3 Provide Application and System Management Services	
Subtask 3.2 Provide Application Monitoring and Management Contractor will provide application monitoring and management services, including: • Monitoring and managing all Licensed Software and Third-Party Products used in the EHR System; • Proactively and reactively notifying County help desk of issues, incidents, and problems found by Contractor that affect or may affect the Service, and of any required County intervention to avoid or resolve the issue, incident, or problem; • Removing or deactivating non-current items monitored or managed by AMS, after obtaining County Approval; • Monitoring and managing the following activities related to Interfaces: outbound Interface queue counts, status and settings, and inbound Interface status and settings; • Monitoring and managing activities related to chart requests, including chart request status, settings, and resubmitting unsuccessful charts; • Monitoring and managing remote report distribution ("**RRD**") server and service status; • Monitoring and managing RRD com port status; • Investigating RRD fax errors and retransmit as needed; • Assisting County in managing RRD hardware; • Monitoring and managing back-end print queues for hung processes; • Review and provide feedback on County proposed changes to County's Interface engine; • Enabling down or cycling hung back-end print queues; and • Monitoring and managing clinical reporting WebSphere Application Server and report	**Deliverable 3.2 Application Monitoring** • Application monitoring and management services. • Weekly calls and monthly reports. **Acceptance Criteria:** • Application monitoring and management services addresses all elements described in subtask 3.2 (Provide Application Monitoring and Management).

Task 3 Provide Application and System Management Services	
request statuses. Contractor will conduct weekly calls with County to discuss applications monitoring and management activities and related issues. Contractor will report monthly on applications monitoring and management, including the tracking and reporting of any issues.	
Subtask 3.3 Provide 24x7x365 Application Support Contractor will provide 24x7x365 application support for all Licensed Software and Third Party Product issues and County support requests. Contractor will: • Develop and maintain the Interface to County's ticket system as between both Contractor and County systems. County will cooperate and support, as appropriate, the Contractor activities to build and maintain the Interface. In the event Contractor is precluded from fulfilling its responsibilities by a third-party, County is responsible for obtaining the cooperation of a third-party. To the extent fees are to be paid to the County's ticket system vendor in connection with the Interface, County shall be responsible for such fees; • Integrate with the County help desk and ticketing system to ensure tracking and resolution of tickets routed to Contractor AMS team for resolution; • Address issues escalated from County help desk related to Licensed Software and Third Party Products; • Provide a single point of contact for application support issues; • Support County help desk incident resolution as needed; • Participate in the process for "hand off" from the County help desk to Contractor; • Maintain a record of incidents handed off from County help desk; • Monitor County help desk tickets to identify	**Deliverable 3.3 24x7x365 Application Support** • 24x7x365 application support. • Weekly calls and monthly reports. **Acceptance Criteria:** • 24x7x365 application support addresses all elements described in subtask 3.3 (Provide 24x7x365 Application Support).

Task 3 Provide Application and System Management Services	

patterns and improve services;
• Electronically document resolution through an Interface to County's help desk and ticketing system (currently Numara Footprints);
• Conduct root cause analysis on frequently recurring calls on the same topic;
• Provide monthly service reports that include:
  ○ Number of service requests;
  ○ Description of issues;
  ○ Root cause analysis; and
  ○ Resolutions implemented;
• Identify recurring issues, proactively recommend solutions, and implement based on County's request;
• Support County in addressing recurring issues as needed and agreed upon;
• Perform Daylight Saving Time management activities for the Licensed Software and Third Party Products ;
• Troubleshoot and resolve foreign system and medical device Interface errors that originate in Contractor systems;
• Participate in the resolution of Interface errors that originate in County systems or third-party systems;
• Maintain remote report distribution settings;
• Develop and maintain workflow documentation;
• Review and provide input to help desk scripts as necessary to improve the efficiency and effectiveness of incident resolution processes;
• Build and maintain reference database elements;
• Performing event code and event set changes as required; and
• Maintain application level Windows Terminal Services location.
Contractor will conduct weekly calls with County	

Task 3 Provide Application and System Management Services	
to discuss application support activities and related issues. Contractor will report monthly on application support activities, including the tracking and reporting of any issues.	
Subtask 3.4 Provide Operations Management Contractor will provide operations management services, including: • Monitoring scheduled operations jobs to ensure scheduled tasks start and process without error; • Detection of abnormal conditions or alarms; • Logging of failed operations jobs, and corrective action taken; • Restarting operations jobs as required; • Documenting and reporting operations job issues; • Monitoring purge job activity to ensure purges are completed successfully; • Assist County in developing purge retention criteria; • Setting County-defined purge retention criteria and scheduling purge jobs in accordance with subtask 3.12 (Provide Technology Change Management); and • Adding and removing operations jobs. Contractor will conduct weekly calls with County to discuss operations management services activities and related issues. Contractor will report monthly on Operations management services, including the tracking and reporting of any issues.	**Deliverable 3.4 Operations Management** • Operations management services. • Weekly calls and monthly reports. **Acceptance Criteria:** • Operations management services address all elements described in subtask 3.4 (Provide Operations Management).
Subtask 3.5 Provide Report Creation and Maintenance Contractor will implement County requests for custom report creation and maintenance, including: • Providing an inventory of all reports and discern rules used in County's production system;	**Deliverable 3.5 Report Creation and Maintenance** • Report creation and maintenance. • Weekly calls. **Acceptance Criteria:** • Report creation and maintenance addresses

Task 3 Provide Application and System Management Services	
• Modifications to existing production reports or rules to address County requests; • Changes required for release upgrades and content updates in accordance with subtask 3.12 (Provide Technology Change Management), if applicable; • Troubleshooting issues with custom reports in production; • Managing requests using a tracking tool; • Reporting status of custom report requests to County; • Modifying and testing reports and rules; and • Development and localization of customized workflows within PowerChart (mPages) utilizing a Bedrock Wizard. For each custom report request, Contractor will work with County to prioritize requests and provide County with an estimated time to implementation. On an ongoing basis, Contractor will identify data, information, and reports to ensure the County can meet Meaningful Use requirements. Contractor will optimize the design and build of the Licensed Software and Third-Party Products to deliver the information, data, and reports necessary to report on achieving Meaningful Use. Contractor will support County in the development if reports, including review and validation of County-created reports. Contactor will report weekly on the status of requests and alert County of any issues affecting report creation or maintenance. Contractor will submit CCL reports to County for validation and signoff on CCL Reports, ensuring that the report meets requested intent.	all elements described in subtask 3.5 (Provide Report Creation and Maintenance).
Subtask 3.6 Conduct Maintenance Checks Contractor will conduct Licensed Software Maintenance check activities, including: • Monitor Licensed Software and Third-Party Product notifications (i.e., flashes, advisories, Cerner Knowledge Network) and take	**Deliverable 3.6 Maintenance Checks** • Maintenance checks. • Weekly calls and monthly reports. **Acceptance Criteria:** • Maintenance checks address all elements

Task 3 Provide Application and System Management Services	

necessary action;
• Perform service package/software change certification as needed, including:
  ○ Review of service package certification guidelines released with each package;
  ○ Test service packages and fixes in non-production domain; and
  ○ Validation of code packages upon the install of the package testing to verify a software change;
• Implement service package in accordance with subtask 3.9 (Implement New Releases and Licensed Software Upgrades); and
• Validate service packages/application enhancements and fixes.
Contractor will conduct weekly calls with County to discuss maintenance check activities and related issues.
Contractor will report monthly on maintenance check activities, including the tracking and reporting of any issues.
	described in subtask 3.6 (Conduct Maintenance Checks).

Subtask 3.7 Implement Licensed Software and Third-Party Product Configuration Requests Contractor will implement County Licensed Software and Third-Party Product configuration and other approved non-source code requests in accordance with change management processes developed in subtask 3.12 (Provide Technology Change Management) as requested by County, including: • Modification to existing orders, tasks, preferences, users, etc.; • Addition of code sets and aliases; • Building PowerForms, DTA's, Orders, PowerNotes, PowerPlans, CareSets, OrderSets, etc. • Adding event sets, forms, formularies, results, flow sheets, etc.; and • Bundled Licensed Software configuration requests resulting from changes to County Domains, Venues, or Locations and which	**Deliverable 3.7 Implemented Licensed Software and Third-Party Configuration Requests** • Implemented Licensed Software and Third-Party Product configuration requests. • Weekly calls and monthly reports. **Acceptance Criteria:** • Licensed Software configuration requests are implemented as described in subtask 3.7 (Implement Licensed Software Configuration Requests).

Task 3 Provide Application and System Management Services	
require multiple configuration modifications (e.g., remodeling a floor in a County facility). Contractor will provide County with a detailed requirements document for requested configuration changes and other non-source code changes that are requested to the Licensed Software and Third-Party Products. The design document will include: • Design considerations; • Build steps; • Integration points; and • Steps to validate the change, including training, and communication needs. Contractor will analyze each request and provide County with a proposed implementation schedule. Contractor will implement requests based on County-Approved prioritization and implementation schedule, and work with County to coordinate the move to production. Contractor will provide a centralized tracking system to track requests. Contractor will conduct weekly calls with County to discuss configuration request activities and related issues. Contractor will report monthly on configuration requests, including the tracking and reporting of any issues.	
Subtask 3.8 Provide Incident/Problem Management and Resolution Contractor will provide incident/problem management and resolution services using a structured IT service management methodology, including: • Response to Contractor or County-identified incident/problems; • Assessment of impact on County operations; • Triaging; • Tracking; • Escalation;	**Deliverable 3.8 Incident/Problem Management Report** • Incident/ problem management and resolution services. • Weekly calls. • Monthly Incident/Problem Management Report. **Acceptance Criteria:** • Incidents and problems are resolved as described in subtask 3.8 (Provide Incident/Problem Management and Resolution).

Task 3 Provide Application and System Management Services	
• Notification; and • Resolution. In providing the incident/problem management and resolution services, Contractor will: • Provide a single point of contact for incident reporting, resolution, and escalation; • Provide multiple channels for problem or incident reporting (e.g., online, email, telephone) to single point of contact; • Maintain ownership of all problems through resolution and closure; • Perform root cause analysis on problems; • Notify County help desk of incidents or problems found by Contractor; • Staff operations and provide on-call incident and problem management and resolution staff 24x7x365; and • Ensure notification and escalation of incidents in accordance with the production support plan, service level agreements, and Section 9.7 (Support Services) of the Agreement. Contractor will provide County with a monthly report on incident/problem management, including: • Number of incidents; • List of all open problems; • Priority of problems; • Owner of problems; • Progress on open problems; • Estimated time to resolution of open problems; and • Root cause analysis for resolved problems as requested by County. Contractor will conduct weekly calls with County to discuss configuration request activities and related issues.	

Task 3 Provide Application and System Management Services	
Subtask 3.9 Implement New Releases and Licensed Software Upgrades Contractor will manage and implement Licensed Software and Third-Party Product Revisions. Contractor will create Revision Plans, including: • Revision Management Plan; • Technical assessment of all Domains, Venues, and Locations affected by Revision; • Functional assessment of all Domains, Venues, and Locations affected by Revision; • Impact of the change, including required County workflow changes and training needs; • Test plan; • Back out plan; • Test Scripts; and • Validation of code packages upon the install of the package. Contractor and County will jointly determine Revision schedule and time of implementation. Contractor will install Revisions to all relevant Domains with County Approval and sync all Domains as necessary. On an ongoing basis Contractor will identify data, information, and reports to ensure the County can meet Meaningful Use requirements. Contractor will optimize the design and build of the Licensed Software and Third-Party Products to deliver the information, data and reports necessary to report on achieving Meaningful Use. Contractor will conduct Regression Testing. County will conduct Integration Testing with remote support form Contractor. Contractor will resolve problems/incidents found in Regression or Integration Testing. Contractor will provide a list of changes that may require County to update its training in accordance with subtask 5.1 (Support Training on Revisions). Contractor will provide a dedicated Revision team (upgrade center) to manage all Contractor processes and activities related to the Revision.	**Deliverable 3.9 New Releases and Licensed Software Upgrades** • Revision Management Plan. • New releases, Licensed Software Upgrades and other Revisions. • Regression Testing. **Acceptance Criteria:** • New Releases, Licensed Software Upgrades, and other Revisions are implemented as described in subtask 3.9 (Implement New Releases and Licensed Software Upgrades).

Task 3 Provide Application and System Management Services	
Subtask 3.10 Provide Content Management Contractor will provide services required for updates to content packages, including: • Standard content (e.g., Multum, ICD-10, CPT-4); and • Code content. Contractor will recommend content updates and update content items as requested by County. Contractor will provide package management services, including: • Maintaining standard content updates; • Installing content and service packages and performing technical special instructions; • Performing front-end special instructions for service package loads; • Monitoring Licensed Software and Third-Party Products notifications and taking all appropriate and necessary action to address the subject of the notification; • Developing service package certification guidelines; • Performing service package certification; • Testing service packages and fixes in non-production domain; • Installing content and service packages; • Validating service packages and application enhancements/fixes; and • Support County-performed fat client installation of Licensed Software on County PCs. Contractor will conduct weekly calls with County to discuss content management activities and related issues. Contractor will report monthly on content management, including the tracking and reporting of any issues. County will review and validate the integrity of the resulting data in accordance with the Acceptance Testing procedures set forth in Section 12 (Acceptance) of the Agreement.	**Deliverable 3.10 Content Management** • Content management. • Weekly calls and monthly reports. **Acceptance Criteria:** • Content is updated as described in subtask 3.10 (Provide Content Management).

Task 3 Provide Application and System Management Services	
Subtask 3.11 Conduct Service Level Monitoring and Reporting Contractor will conduct Service Level monitoring and reporting in accordance with Exhibit E (Service Levels and Performance Standard) of the Agreement. Service Level monitoring and reporting will include: • Ongoing monitoring of Contractor adherence to Service Levels; • Any issues that could impact an agreed-upon Service Level; • Resolution of any root-causes impacting Contractor's ability to meet agreed-upon Service Levels; and • Providing monthly statistics and management reports to County on Service Level attainment. Contractor will conduct weekly calls with County to discuss Service Levels and related issues.	**Deliverable 3.11 Service Level Monitoring and Reporting** • Service Level monitoring and reporting. • Weekly calls. **Acceptance Criteria:** • Service Level monitoring and reporting addresses all elements described in subtask 3.11 (Conduct Service Level Monitoring and Reporting).
Subtask 3.12 Provide Technology Change Management Contractor will design and implement a formal process for managing configuration and technology changes made to Licensed Software and Third-Party Products, including: • Coordination of configuration and technology changes with build and deployment teams during the Project; • Communication between AMS and Project team during deployment; • Criteria and processes for "hand off" of configuration and technology change management procedures from Contractor's Project team to Contractor's AMS team; • Production Environment Change Authorization ("**PECA**") process; • Configuration and technology change management procedure including submission, analysis and prioritization of requests; • Weekly configuration and technology change	**Deliverable 3.12 Technology Change Management** • Configuration and technology change management. • Weekly calls and monthly reports. • Configuration and Technology Change Control Board. **Acceptance Criteria:** • Configuration and technology change Management addresses all elements described in subtask 3.12 (Provide Technology Change Management).

Task 3 Provide Application and System Management Services	
Approval meetings; • Execution of configuration and technology change; and • Validation of configuration and technology change. Contractor will assist County in establishing a Configuration and Technology Change Control Board, including: • Criteria for identifying representatives to comprise County's Configuration and Technology Change Control Board and County responsibilities; and • Recommendations for governance structure and processes to support configuration and technology change management activities and meetings. Contractor will work with County to establish and mutually agree upon configuration and technology change control process. Contractor will provide Configuration and technology change management services, including: • Participating on Configuration and Technology Change Control Board to provide advice and direction to change requests; • Providing and maintaining an automated change management system to report and track changes made by Contractor; • Providing ongoing management, including Project plans and transition plan; • Providing reporting to County on change management; • Developing a production change schedule and review with County; • Providing risk management analysis, mitigation, and remediation; • Testing all changes to Licensed Software prior to moving them to production in accordance with the requirements of Exhibit A.21 (EHR System Testing Statement of Work); • Testing application Enhancements, Error	

Task 3 Provide Application and System Management Services	
Corrections, Upgrades and other Revisions in accordance with the requirements of Exhibit A.21 (EHR System Testing Statement of Work); • Developing test scripts and test data in accordance with the requirements of Exhibit A.22 (EHR System Testing Statement of Work); and • Developing training materials as specified in subtask 5.1 (Support Training on Revisions). Contractor will develop communication and processes for Approval of Production Environment Change Authorization. Contractor will submit PECA process for County Approval. Contractor will manage PECA process for Licensed Software. Contractor affirms that PECA forms relate to technical changes only and are not an authorization for Optional Work that would impact the Contract Sum. Contractor will conduct weekly calls with County to discuss configuration and technology change management activities and related issues. Contractor will report monthly on configuration and technology change management, including the tracking and reporting of any issues.	
Subtask 3.13 Provide Configuration Management Contractor will provide configuration management of the EHR System, including: • Identifying, controlling, maintaining, and verifying installed hardware, Licensed Software and Third-Party Products; • Verifying configuration records against the infrastructure and correcting any exceptions, and provide configuration records in centralized location; • Developing and maintaining configuration management policies, and procedures; • Establishing and maintaining process for tracking configuration changes; • Establishing and maintaining guidelines for	**Deliverable 3.13 Configuration Management** • Configuration management. • Configuration Management Reports. • Weekly calls and monthly reports. **Acceptance Criteria:** • Configuration Management addresses all elements described in subtask 3.13 (Provide Configuration Management).

Task 3 Provide Application and System Management Services	
physical and logical separation between development, test, and production domains; • Establishing and maintaining process for deploying and backing out of configuration items; • Establishing and maintaining configuration baselines as reference points for rebuilds; • Providing ability to revert to stable configuration states; • Establishing and maintaining process for verifying the accuracy of configuration items, adherence to configuration management processes and identifying process deficiencies; and • Providing County Configuration Management Reports as required and defined by County configuration management. Contractor will conduct weekly calls with County to discuss configuration management activities and related issues. Contractor will report monthly on configuration management activities, including the tracking and reporting of any issues.	
Subtask 3.14 Provide Interface Support Contractor will provide County with Interface support for the EHR System, including: • Monitoring outbound Interface queue counts and status to ensure active outbound Interfaces are operational; • Monitoring inbound Interfaces status to ensure active inbound Interfaces are operational; • Monitoring server status for medical device Interfaces and bedside medical device Interfaces; • Maintaining and updating Interfaces; • Developing Interface Documentation including diagrams and schematics; • Providing feedback on Interface specifications for new Interfaces and Supporting County with development of project plan for new	**Deliverable 3.14 Interface Support** • Interface support. • Weekly calls and monthly reports. **Acceptance Criteria:** • Interface Support addresses all elements described in subtask 3.14 (Provide Interface Support).

Task 3 Provide Application and System Management Services	
Interface support. Contractor will conduct weekly calls with County to discuss Interface management activities and related issues. Contractor will report monthly on Interface management, including the tracking and reporting of any issues.	
Subtask 3.15 Maintain Security and Manage Authorization Controls and Processes Contractor will provide application specific security services based on County guidelines in accordance with Exhibit K (Information Security Requirements) and Section 20 (Security) of the Agreement, including; • Provide and maintain virus protection; • Monitor for EHR System security errors, exceptions, and attempted violations; • Report security violations to County per County policies; and • Monitor legal and regulatory requirements, conduct compliance testing, and provide compliance and certification review in accordance with task 7 (Perform Compliance Testing) of Exhibit A.21 (EHR System Testing). Contractor will provide Security services in compliance with applicable federal, state, County, and payor requirements. Contractor will manage and implement authorization controls and processes, including: • Maintaining and updating security technology architecture; • Providing and maintaining a user database for application-specific security including task access, positions, and roles (e.g., build form); • Conducting batch user account provisioning for Licensed Software accounts as requested by County and in accordance with Exhibit A.20 (Security Statement of Work); and • Creating and managing Contractor's user accounts. Contractor will develop a change control process	**Deliverable 3.15 Security Services and Authorization Controls** • Security services and authorization controls. • Weekly calls and monthly reports. **Acceptance Criteria:** • Security services contain all elements required by Subtask 3.15 (Maintain Security and Manage Authorization Controls and Processes).

Task 3 Provide Application and System Management Services	
for the creation and modification of Contractor user accounts, and submit it for County Approval. Contractor will conduct weekly calls with County to discuss security and authorization management activities and related issues. Contractor will report monthly on security and authorization management, including the tracking and reporting of any issues.	

Task 4 Initiate and Provide Hosting Services
Task Description
Contractor will initiate and provide the Hosting Services, and manage, monitor, and maintain the Hosting Environment in accordance with the requirements of Exhibit N (Required Remote Hosted Software Terms and Conditions), Exhibit N.1 (Hosting Services), Exhibit E (Service Levels and Performance Standards), Exhibit K (Information Security Requirements), the Agreement, and applicable SOWs. The Hosting Services will include documentation of account management, operations and administration, database administration, change management, capacity management, performance management, and Service Level monitoring and reporting.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor AMS Engagement Leader;
  ○ Contractor AMS Engagement Controller;
  ○ Contractor AMS Integration Architect;
  ○ Contractor AMS Solution Architect;
  ○ Contractor AMS Delivery Consultant;
  ○ Contractor AMS Solution Analyst;
  ○ Contractor Hosting Services Service Delivery Manager;
  ○ Contractor Hosting Services Production Owner;
  ○ Contractor Hosting Services System Engineer; and
  ○ Contractor Hosting Services Database Administrator.
• County Key Employees
  ○ County Project Director;
  ○ County Project Manager;
  ○ County SOW Team Leads;
  ○ County Technical Manager;
  ○ County Desktop Technicians;
  ○ County Network Engineers;
  ○ County Helpdesk Analysts; and
  ○ County Interface Manager.

Task 4 Initiate and Provide Hosting Services	
Subtasks/Deliverables	

Subtask 4.1 Prepare Hosting Services Delivery Document
Contractor will develop, maintain, and update a Hosting Services Delivery Document in accordance with Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) which includes Contractor's approach to the following:
• Transition of Licensed Software from responsibility of Contractor Project implementation team to Contractor Hosting Services team;
• Access management in accordance with subtask 3.14 (Provide Interface Support), including:
  ○ County user accounts; and
  ○ Contractor Personnel accounts;
• Operations and Administration, including:
  ○ Contractor infrastructure;
  ○ Initial and ongoing evaluation and monitoring of County infrastructure and operations;
  ○ At County's request, diagnostics and validation of County infrastructure and operations;
  ○ Recommendations for improvements to County infrastructure; and
  ○ Contractor and County roles and responsibilities;
• Capacity planning and management, including:
  ○ Storage, network, and processing capabilities; and
  ○ Monitoring performance;
• Management of Contractor-provided servers; including:
  ○ Monitoring;
  ○ Updating; and
  ○ Optimizing performance;
• Maintaining Service Levels
	Deliverable 4.1 Hosting Services Delivery Document
	• Hosting Services Delivery Document.
	
	Acceptance Criteria:
	• The Hosting Services Delivery Document incorporates, and is consistent with, County-provided input;
	• The Hosting Services Delivery Document address all elements described in subtask 4.1 (Prepare Hosting Services Delivery Document).
	• The Hosting Services Delivery Document has been Approved by County.

Task 4 Initiate and Provide Hosting Services	

• Defining and developing alerts (network latency alert, saturation alert, etc.);
• Service Level monitoring and reporting, including:
  ○ Alerts;
  ○ Service metrics;
  ○ Monitoring tools;
  ○ Service request tracking system;
  ○ Audits;
  ○ Weekly Contractor meetings with County; and
  ○ Processes for communicating scheduled outages;
• Maintaining security, including:
  ○ Physical security; and
  ○ Logical security;
• Preventative maintenance, including technology refreshes to remain current with applicable industry standards;
• Defining procedures for backups and restores, including:
  ○ Frequency;
  ○ Method;
  ○ Validation; and
  ○ Defining restore checkpoints; and
• Providing business continuity and disaster recovery services.
Contractor will review the draft Hosting Services Delivery Document with County.
Contractor will incorporate County feedback and proposed changes as appropriate into the County Hosting Services Delivery Document and submit a final version to County for Approval.	

Subtask 4.2 Provide Hosting Services Throughout the Term of the Agreement, Contractor will provide Hosting Services in accordance with the Production Support Plan and Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work). The Hosting Services will comply with the	**Deliverable 4.2 Hosting Services** • Hosting Services. • Weekly calls and monthly reports. **Acceptance Criteria:** • The Hosting Services comply with the

Task 4 Initiate and Provide Hosting Services	

requirements of Exhibit N (Required Remote Hosted Software Terms and Conditions), Exhibit N.1 (Hosting Services), Exhibit E (Service Levels and Performance Standards), Exhibit K (Information Security Requirements), the Agreement, and applicable SOWs.
Contractor will:
• Operate the Licensed Software and the Hosting Services on a 24x7x365 basis;
• Provide County with access to the Licensed Software and Hosting Services over a pair of dedicated network connections from the Hosting Environment on a 24x7x365 basis;
• Provide, monitor, and maintain Hosting Services hardware, software, and communications infrastructure, including:
  ○ Physical infrastructure for data center (e.g., facility, environment, power);
  ○ Shared networking and application infrastructure; and
  ○ Computer systems, network equipment, and Contractor WAN;
• In coordination with AMS, provide and update list of Contractor-certified devices and provide mechanism to process requests to certify additional devices;
• Manage, monitor, and maintain Contractor-owned equipment in County facilities;
• Provide technical support in the installation of network termination devices;
• In coordination with AMS, monitor all inbound and outbound Interfaces and provide County with notice of inactive Interfaces or other potential connectivity issues; and
• In coordination with AMS, provide and maintain all Licensed Software, Hosting Software, and Third-Party Product licenses and sublicenses, and Documentation required to provide the Hosting Services.
Contractor will conduct weekly calls with County to discuss Hosting Services activities and related
	Specifications.
	• The Hosting Services address all elements described in subtask 4.2 (Provide Hosting Services).

Task 4 Initiate and Provide Hosting Services	
issues. Contractor will report monthly on Hosting Services activities, including the tracking and reporting of any issues.	
Subtask 4.3 Conduct Service Level Monitoring and Reporting Contractor will conduct monitoring and reporting of Service Levels to County, including: • Continuously monitoring the Hosting Environment in accordance with Section 2 (Service Monitoring and Management) of Exhibit E (Service Levels and Performance Standards); • Developing and delivering to County monthly reports showing Service Level performance in accordance with Section 4.6 (Reporting Service Level) of Exhibit E (Service Levels and Performance Standards); and • Providing County with tools to measure Licensed Software and Hosting Services response time. Contractor will provide Service Level reports (e.g., performance metrics and system accounting information) to the designated County representatives in a format agreed to by County. Contractor will conduct weekly calls with County to discuss Service Level monitoring activities and related issues.	**Deliverable 4.3 Service Level Reports** • Weekly calls. • Monthly Service Level Reports. • Response time measurement tool. **Acceptance Criteria:** • Monthly Service Level Reports include sufficient detail to verify compliance with Service Levels and are County Approved.
Subtask 4.4 Respond to Support Service Requests In coordination with AMS, Contractor will provide Support Services as required in the Agreement. Contractor will: • Participate in weekly meetings with County to discuss status of, and improvement of response time to, service requests; • Provide technical guidance to County on configuration of County internal network and workstations, peripheral devices, and other County hardware to enable connectivity to Hosting Services;	**Deliverable 4.4 Support Services** • Support Services. • Weekly calls and monthly reports. • Service Report Tracking System. **Acceptance Criteria:** • Support Services contain all elements required by Subtask 4.4 (Respond to Support Service Requests), and are County Approved.

Task 4 Initiate and Provide Hosting Services	
• Provide recommendations to County for issue identification and resolution procedures, including steps to diagnose whether issues originate in County-owned or Contractor-hosted systems; • Notify County of any issues Contractor discovers that may adversely impact the Hosted Services; • Notify County of any planned outages within the timeframes specified in Exhibit N (Required Remote Hosting Software Terms and Conditions), and the Agreement; • Provide, manage, and maintain a method for proper notification and escalation of issues; • Log all incidents and problems; and • Provide incident and management reports and statistics to County as requested by County but in no event less than once per month. Contractor will set up a Service Request Tracking System as required by Section 4.1 (Service Request Tracking System) of Exhibit E (Service Levels and Performance Standards). Contractor will conduct weekly calls with County to discuss service requests and related issues. Contractor will report monthly on service requests, including the tracking and reporting of any issues.	
Subtask 4.5 Maintain Security Contractor will provide security management services in accordance with Exhibit A.20 (Security Statement of Work), Exhibit K (Information Security Requirements), and Section 3 (Hosting Environment) of Exhibit N.1 (Hosting Services). Contractor will: • On an ongoing basis, provide input and written recommendations into County security plan. • Provide data center physical security measures and controls; • Govern physical access to Contractor facilities with access entitlement control;	**Deliverable 4.5 Security Services** • Security management services. • Input to update County security plan. • Weekly and monthly reports. **Acceptance Criteria:** • Security Management Services contain all elements required by subtask 4.5 (Maintain Security).

Task 4 Initiate and Provide Hosting Services	
• Utilize encryption in storing and transmitting County Data; • Provide physical and logical security of all service components (hardware and software) and data; • Monitor for EHR System security errors, exceptions, and attempted violations; • Implement and monitor network intrusion and virus detection systems throughout Hosted Services network and computing infrastructure; • Provide and maintain virus protection; • Provide dedicated security manager to enforce security procedures and resolve issues; • Provide and manage URL access to Internet sites approved for appropriate business purposes; • Provide Hosting Environment security plan and infrastructure based on security requirements, standards, procedures, policies, County, federal, state, and local requirements and risks; • Implement physical and logical security plans for all Hosting Environment components consistent with Contractor security policies and industry standards; • Implement logical security plans for all Hosting Environment components consistent with applicable County security policies as it relates to the EHR System; • Report security violations to County per County policies and in accordance with subtask 2.3 (Define Contractor Process for Notifying County of Security Issues); and • Provide and maintain all documentation required for security audits and internal control and control testing. Contractor will provide all Security Management Services in compliance with all applicable federal, state, County, and payor requirements. Contractor will conduct weekly calls with County	

Task 4 Initiate and Provide Hosting Services	
to discuss security activities and related issues. Contractor will report monthly on security activities and alert County of any issues.	
Subtask 4.6 Conduct Backups and Restores Contractor will conduct the backups and restores required by subtask 4.1 (Prepare Hosting Services Delivery Document) and Section 3 (Backups) of Exhibit E (Service Levels and Performance Standards), including: • Regular backups of all County Data; • Backups of Licensed Software and Third-Party Products in accordance with the Hosting Services Delivery Document; and • Backup validation. Contractor will conduct weekly calls with County to discuss backup and restore activities and related issues. Contractor will provide County with monthly reports certifying successful backup validation.	**Deliverable 4.6 Backups Validation Report** • Backups validation report. • Weekly calls and monthly reports. **Acceptance Criteria:** • The Backups validation report address all elements described in subtask 4.6 (Conduct Backups and Restores).
Subtask 4.7 Provide Business Continuity and Disaster Recovery Services Contractor will provide prioritized business continuity and disaster recovery services for the Hosting Services and associated infrastructure (e.g., servers, network connection) in accordance with Section 22 (Disaster Recovery/Business Continuity) of the Agreement. Contractor will: • Maintain and provide access to 7x24 Downtime Viewer; • Maintain and provide access to the 7x24 Access Read Only Domain for Citrix applications: (i) immediately for Scheduled Downtime; and (ii) for Unscheduled Downtime, within thirty (30) minutes from: (a) the earliest point in time that such Outage is or reasonably should be detected by Contractor, or (b) the time County notifies Contractor to enable access; • Develop and maintain detailed Business Continuity Plan and Disaster Recovery Plan;	**Deliverable 4.7 Business Continuity and Disaster Recovery** • Contractor's current Business Continuity Plan and Disaster Recovery Plan. • Report of Business Continuity Plan and Disaster Recovery Plan test results. • Updated Business Continuity Plan and Disaster Recovery Plan. • Weekly calls and monthly reports. **Acceptance Criteria:** • County-Approved Business Continuity Plan and Disaster Recovery Plans. • County-Approved Business Continuity Plan and Disaster Recovery Plan test results.

Task 4 Initiate and Provide Hosting Services	
• Provide County with a copy of Contractor's current Business Continuity Plan and Disaster Recovery Plans; • Review and update the Business Continuity Plan and Disaster Recovery Plans on at least an annual basis; • Develop action plan to mitigate risks and issues discovered during the Business Continuity Plan and Disaster Recovery Plan review; • Notify County if Contractor conducts fail over; and • Provide County with copies of all updates to the Business Continuity Plan and Contractor's standard Disaster Recovery Plan. Contractor will initiate the Disaster Recovery Plan in the event of a Contractor disaster recovery situation and notify County per the Agreement and disaster recovery policies and procedures. Contractor will coordinate with County during a Contractor disaster recovery situation per the Agreement and disaster recovery policies and procedures. Contractor will conduct weekly calls with County to discuss business continuity and disaster recovery activities and related issues. Contractor will report monthly on business continuity and disaster recovery activities and alert County of any issues.	

Task 5 Conduct Ongoing Training Activities
Task Description
Contractor will conduct ongoing training activities necessary to support County in maintaining and operating the EHR System.
Personnel Requirements

• Contractor Key Employees
  ○ Contractor AMS Engagement Leader;
  ○ Contractor AMS Engagement Controller;
  ○ Contractor AMS Integration Architect;
  ○ Contractor AMS Solution Architect;
  ○ Contractor AMS Delivery Consultant;

Task 5 Conduct Ongoing Training Activities	
○ Contractor AMS Solution Analyst; ○ Contractor Hosting Services Service Delivery Manager; ○ Contractor Hosting Services Production Owner; ○ Contractor Hosting Services System Engineer; and ○ Contractor Hosting Services Database Administrator. • County Key Employees ○ County Project Director; ○ County Project Manager; ○ County SOW Team Leads; ○ County Technical Manager; ○ County Desktop Technicians; ○ County Network Engineers; ○ County Helpdesk Analysts; and ○ County Interface Manager.	
Subtasks/Deliverables	
Subtask 5.1 Support Training on Revisions In preparation for Revisions, Contractor will conduct training for County support personnel and trainers on Revisions, including: • For each Revision, develop a training plan, including: ○ Content; ○ Tools; and ○ Delivery methods; • Provide County with sample training materials and sample help desk scripts; • Provide guidance to the County in developing training materials, including County help desk scripts as they relate to the EHR System; • Review County training materials for completeness and accuracy; • Provide any existing WBTs to County support staff and trainers; and • Provide County with training resources for training of County support personnel and trainers, as requested by County and mutually agreed on as per governance structure identified in Exhibit A.2 (Project Initiation Statement of Work).	**Deliverable 5.1 Training on Revisions** • Training on Revisions. • Sample training materials. • Review and validation of County developed training materials. **Acceptance Criteria:** • The training on Revisions support addresses all elements described in subtask 5.1 (Support Training on Revisions).

Task 5 Conduct Ongoing Training Activities	
Subtask 5.2 Maintain LearningLIVE Environment Contractor will maintain the LearningLIVE environment for County, including: • Hosting the LearningLIVE environment; • Providing County personnel with access to LearningLIVE environment; • Providing periodic updates to LearningLIVE code; and • Providing periodic web-based training for County personnel on new features and functionality of the LearningLIVE environment; and • Providing ongoing support via the uLearn portal.	**Deliverable 5.2 Learning LIVE Environment and Training** • LearningLIVE environment. • LearningLIVE training. **Acceptance Criteria:** • The LearningLIVE Environment and training support address all elements described in subtask 5.2 (Maintain LearningLIVE Environment).

5.3 Project Deliverable Expectations Document Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit A.25 (Project Control Document)

to the

Electronic Health Records System and Services Agreement

1. Introduction

This Exhibit A.25 (Project Control Document) (sometimes referred to in this Exhibit as "**this PCD**") is an attachment and addition to the Electronic Health System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this PCD, the terms of the Agreement shall prevail and nothing in this PCD shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this PCD and are Approved. This PCD includes any attachments hereto. Any capitalized terms not defined in this PCD shall have the same meanings as used in the Agreement.

2. Overview

This PCD is to be completed by the Contractor with input from the appropriate County executive and clinician stakeholders in accordance with task 4 (Complete Project Control Document) of Exhibit A.2 (Project Initiation Statement of Work). This PCD will be used by Contractor and County to manage, track, and evaluate Project performance and is comprised of a number key Project documents. This PCD and its sub-component documents will be maintained and updated throughout the life of the Project in accordance with the Agreement and the applicable Statements of Work.

3. PCD Components

The following Project documents are components of this PCD and are attached to the Agreement as Exhibits A.25.1 through A.25.11. Documents marked with a * are required to be completed prior to submission of the Agreement to the Board for Approval. All other documents will be completed within thirty (30) days of the Effective Date.

- Project Work Plan ("**PWP**")*
- Error Management Plan ("**EMP**")
- Project Communications Strategy
- Risk Management Plan
- Project Staffing and Resource Management Plan (**"SRMP"**)*
- Configuration and Technology Change Management Plan ("**CTCMP**")
- Project Team Organization Plan
- Issue Management Plan
- Project Change Management Plan
- Quality Management Plan
- Deliverables Management Plan
- Project Work Plan Management Document
- Procedures for Status Meetings / Reporting

4. Key Deliverables

The Project Key Deliverables are listed in Exhibit C.6 (Key Milestones and Key Deliverables Table) of the Agreement.

Exhibit A.25.1 (Project Work Plan)

to the

Electronic Health Records System and Services Agreement

ID	Task Name	Duration	Start	Finish	Predecessors
1	**KEY EVENTS**	**153.2 wks**	**Fri 12/21/12**	**Fri 11/27/15**	
2	CONTRACT EXECUTION	7 days	Fri 12/21/12	Sat 12/29/12	
3	STRATEGIC ASSESSMENT	1 day	Fri 3/1/13	Fri 3/1/13	2FS+4 wks
4	CLIENT EXECUTIVE SESSION	5 days	Mon 4/1/13	Fri 4/5/13	2FS+6 wks
5	PROJECT PREPARATION	5 days	Mon 4/22/13	Fri 4/26/13	4FS+2 wks
6	GATEWAY: PROJECT STARTUP	1 day	Mon 4/29/13	Mon 4/29/13	7SS-2 wks
7	PROJECT KICKOFF	5 days	Mon 5/13/13	Fri 5/17/13	5FS+2 wks
8	SYSTEM REVIEW	5 days	Mon 7/8/13	Fri 7/12/13	7FS+7 wks
9	DESIGN REVIEW	5 days	Mon 9/30/13	Fri 10/4/13	8FS+11 wks
10	GATEWAY: DESIGN	1 day	Mon 11/25/13	Mon 11/25/13	11SS-2 wks
11	SYSTEM VALIDATION SESSION	5 days	Mon 12/9/13	Fri 12/13/13	9FS+9 wks
12	TRAINER AND CONVERSION PREP	5 days	Mon 2/10/14	Fri 2/14/14	11FS+8 wks
13	MAINTENANCE TRAINING	5 days	Mon 3/10/14	Fri 3/14/14	12FS+3 wks
14	INTEGRATION TESTING 1	5 days	Mon 4/14/14	Fri 4/18/14	13FS+4 wks
15	GATEWAY: TESTING	1 day	Mon 4/21/14	Mon 4/21/14	14SS+1 wk
16	INTEGRATION TESTING 2	5 days	Mon 6/2/14	Fri 6/6/14	14FS+6 wks
17	GATEWAY: CONVERSION READINESS	1 day	Mon 6/9/14	Mon 6/9/14	18SS-2 wks
18	CONVERSION	5 days	Mon 6/23/14	Fri 6/27/14	16FS+1 wk
19	Cluster 1 Conversion (Harbor)	5 days	Mon 6/23/14	Fri 6/27/14	16FS+1 wk
20	Productive Use Cluster 1	0 days	Mon 6/30/14	Mon 6/30/14	19FS+1 day
21	Cluster 2 Conversion (MLK MACC)	1 wk	Mon 8/18/14	Fri 8/22/14	19FS+7 wks
22	Productive Use Cluster 2	0 days	Mon 8/25/14	Mon 8/25/14	21FS+1 day
23	GATEWAY: STABILIZATION	1 day	Mon 7/28/14	Mon 7/28/14	18FS+4 wks
24	POST CONVERSION REVIEW	5 days	Mon 9/8/14	Fri 9/12/14	18FS+10 wks
25	ICD10	11 wks	Wed 10/1/14	Tue 12/16/14	
26	Cluster 3 Conversion (USC)	2 wks	Tue 2/3/15	Mon 2/16/15	21FS+5.8 mons
27	Productive Use Cluster 3	0 days	Mon 2/16/15	Mon 2/16/15	26FS-1 day
28	Cluster 4 Conversion (High Desert MACC)	1 wk	Tue 7/7/15	Mon 7/13/15	26FS+5 mons
29	Productive Use Cluster 4	0 days	Tue 7/14/15	Tue 7/14/15	28FS+1 day
30	Cluster 5 Conversion (Rancho)	0 days	Tue 9/15/15	Tue 9/15/15	28FS+2 mons
31	Productive Use Cluster 5	0 wks	Tue 9/15/15	Tue 9/15/15	30
32	Cluster 6 Conversion (Olive View)	2 wks	Mon 11/16/15	Fri 11/27/15	30FS+1 mon
33	Productive Use Cluster 6	0 days	Fri 11/27/15	Fri 11/27/15	32FS-1 day

ID	Task Name	Duration	Start	Finish	Predecessors
34	**Workshops / Design Coaching Sessions**	**52.6 wks**	**Fri 3/15/13**	**Tue 3/18/14**	
35	Project Start up: Orders Prep Session	4 wks	Fri 3/15/13	Thu 4/11/13	7SS-60 days
36	Project Start up: Formulary Build Session	4 wks	Fri 3/15/13	Thu 4/11/13	7SS-60 days
37	WORKFLOW LOCALIZATION FOR PHYSICIANS	4 wks	Mon 10/14/13	Fri 11/8/13	9SS+2 wks
38	WORKFLOW LOCALIZATION FOR NURSING AND ANCILLARY	4 wks	Mon 11/25/13	Fri 12/20/13	9SS+8 wks
39	LEADING STRATEGIC CHANGE WORKSHOP	5 days	Mon 9/9/13	Fri 9/13/13	9SS-3 wks
40	CHANGE CONTROL SESSION	1 day	Mon 12/16/13	Mon 12/16/13	11
41	SYSTEM VALIDATION WORKSHOP	2 hrs	Mon 10/7/13	Mon 10/7/13	9
42	MAINTENANCE PREP SESSION	3 days	Mon 12/16/13	Wed 12/18/13	11
43	INTEGRATION TESTING PREP SESSION	2 days	Mon 3/17/14	Tue 3/18/14	13
44	Design Coaching: Security Data Collection – PoweChart	1 wk	Mon 10/7/13	Fri 10/11/13	9
45	Design Coaching: Security Data Collection – Privileges/ Exception Groups	2 days	Mon 10/7/13	Tue 10/8/13	9
46	Design Coaching: Message Center	1 day	Mon 7/15/13	Mon 7/15/13	8
47	Design Coaching: OrderSet Development Workshop	1 day	Mon 7/15/13	Mon 7/15/13	8
48	Design Coaching: PowerNote Workshop	2 wks	Mon 12/16/13	Fri 12/27/13	11
49	Design Coaching: OM Workbook	5 days	Mon 7/15/13	Fri 7/19/13	8
50	Design Coaching: Meds Integration Process	5 days	Mon 7/15/13	Fri 7/19/13	8
51	Design Coaching: GL & 835 Processing Build	3 days	Mon 10/7/13	Wed 10/9/13	9
52	Design Coaching: Claims Rules	2 days	Mon 10/7/13	Tue 10/8/13	9
53	Design Coaching: Bedrock Scheduling Wizards	3 days	Mon 7/15/13	Wed 7/17/13	8
54	Design Coaching: Scheduling Data Collection Workbook	3 days	Mon 7/15/13	Wed 7/17/13	8
55	Design Coaching: Orders to Scheduling Integration Session	4 hrs	Mon 10/7/13	Mon 10/7/13	9
56	Design Coaching: Bedrock Gen Lab Wizards	2 days	Mon 7/15/13	Tue 7/16/13	8
57	Design Coaching: Collections Scheduling Data Collection Workbook	2 days	Mon 7/15/13	Tue 7/16/13	8
58	Design Coaching: Bedrock Blood Bank Wizards	3 days	Mon 7/15/13	Wed 7/17/13	8
59	Design Coaching: Blood Bank Data Collection Workbook	4 hrs	Mon 7/15/13	Mon 7/15/13	8
60	Design Coaching: Formulary Review	2 hrs	Mon 7/15/13	Mon 7/15/13	8
61	Design Coaching: Bedrock RadNet Wizards	3 days	Mon 7/15/13	Wed 7/17/13	8
62	Design Coaching: RadNet Data Collection Workbook	2 days	Mon 7/15/13	Tue 7/16/13	8
63	Design Coaching Session: SurgiNet Data Collection Workbook	2 days	Mon 7/15/13	Tue 7/16/13	8
64	Design Coaching Session: SurgiNet Charge Services Data Collection	2 hrs	Mon 7/15/13	Mon 7/15/13	8
65	Unit Test: Point of Care Onsite Testing	1 wk	Mon 12/30/13	Fri 1/3/14	11FS+2 wks
66	**Timeline View (manually update)**	**70 wks**	**Mon 7/8/13**	**Fri 11/7/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
67	DESIGN	29 wks	Mon 7/8/13	Fri 1/24/14	
68	BUILD	36 wks	Mon 9/30/13	Fri 6/6/14	
69	TEST	50 days	Mon 4/21/14	Fri 6/27/14	
70	CONVERSION	90 days	Mon 7/7/14	Fri 11/7/14	
71	**SOW #1 - Overall Project Management, Planning, Coordination and Integration**	**154.2 wks**	**Fri 12/21/12**	**Fri 12/4/15**	
72	**CLIENT EXECUTIVE SESSION**	**20 wks**	**Mon 1/14/13**	**Fri 5/31/13**	
73	DELIVERABLE: Solution Startup Checklist	3 wks	Mon 1/14/13	Fri 2/1/13	2FS+2 wks
74	Review and Finalize Domain Strategy	2 wks	Mon 4/8/13	Fri 4/19/13	4
75	Perform Project Set-up Tasks	2 wks	Mon 4/8/13	Fri 4/19/13	4
76	Coordinate with 3rd Party Order Set Vendor	1 wk	Mon 4/8/13	Fri 4/12/13	4
77	Assign Committees and Project Staff in Governance	3 wks	Mon 5/13/13	Fri 5/31/13	4
78	DELIVERABLE: Signed Blood Bank Validation Letter	3 wks	Mon 4/8/13	Fri 4/26/13	4
79	Complete Project Charter	2 wks	Mon 5/6/13	Fri 5/17/13	4
80	**Task 2 Perform Project Administration**	**125.2 wks**	**Fri 12/21/12**	**Fri 5/15/15**	
81	Subtask 2.1 Coordinate Project Activities for all SOWs, including "hand-offs" between SOWs	6 mons	Fri 12/21/12	Thu 6/6/13	
82	Subtask 2.2 Develop Status Reports	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
83	Subtask 2.3 Conduct Status Meetings	30 mons	Mon 1/28/13	Fri 5/15/15	2FS+1 mon
84	**Task 3 Perform Project Management and Ongoing Updates of the Project Control Documents**	**120 wks**	**Fri 12/21/12**	**Thu 4/9/15**	
85	Subtask 3.1 Maintain Project Work Plan	30 mons	Fri 12/21/12	Thu 4/9/15	347FF
86	Subtask 3.2 Perform Error Management	120 wks	Fri 12/21/12	Thu 4/9/15	348FF
87	Subtask 3.3 Perform Risk Management	120 wks	Fri 12/21/12	Thu 4/9/15	350FF
88	Subtask 3.4 Manage Project Staffing and Resources	120 wks	Fri 12/21/12	Thu 4/9/15	351FF
89	Subtask 3.5 Perform Configuration and Technology Change Management	120 wks	Fri 12/21/12	Thu 4/9/15	352FF
90	Subtask 3.6 Perform Issue Management	120 wks	Fri 12/21/12	Thu 4/9/15	353FF
91	Subtask 3.7 Perform Project Change Management	120 wks	Fri 12/21/12	Thu 4/9/15	354FF
92	Subtask 3.8 Perform Quality Management	120 wks	Fri 12/21/12	Thu 4/9/15	355FF
93	Subtask 3.9 Perform Deliverables Management	120 wks	Fri 12/21/12	Thu 4/9/15	356FF
94	Subtask 3.10 Develop Procedures for Status Meetings / Reports	30 mons	Fri 12/21/12	Thu 4/9/15	357FF
95	**PROJECT PREPARATION**	**3 wks**	**Mon 4/29/13**	**Fri 5/17/13**	
96	Schedule Open House Demo Sessions	1 wk	Fri 5/10/13	Thu 5/16/13	5
97	Meaningful Use Education session for client project team	1 wk	Mon 4/29/13	Fri 5/3/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
98	Domain Preparation	1 wk	Mon 4/29/13	Fri 5/3/13	5
99	RDDS Schedule	1 wk	Mon 4/29/13	Fri 5/3/13	5
100	Migration Extracts Review	1 wk	Mon 4/29/13	Fri 5/3/13	5
101	Finalize Change Control	3 wks	Mon 4/29/13	Fri 5/17/13	5
102	**Task 6 Maintain Project Library on MethodM Online**	**25 mons**	**Mon 4/22/13**	**Fri 3/20/15**	**95SS**
103	Subtask 6.1 Maintain Project Library	25 mons	Mon 4/22/13	Fri 3/20/15	
104	**PROJECT KICKOFF**	**2 wks**	**Mon 5/20/13**	**Fri 5/31/13**	
105	Ensure the Latest Bedrock Admin Packages Have Been Installed	2 wks	Mon 5/20/13	Fri 5/31/13	7
106	Complete Bedrock tasks per this stage of the project. Refer to the Bedrock Process Implementation Guide.	2 wks	Mon 5/20/13	Fri 5/31/13	7
107	Finalize RDDS Strategy and Checklist	2 wks	Mon 5/20/13	Fri 5/31/13	7
108	Secure Technical Resources for INet Virtual Hardware Config & Camera Installation	1 wk	Mon 5/20/13	Fri 5/24/13	7
109	Prepare to present Zynx Forecasting Tool and benefit measured in tool at Benefits Workshop	1 wk	Mon 5/20/13	Fri 5/24/13	7
110	**SYSTEM REVIEW**	**2 wks**	**Mon 7/15/13**	**Fri 7/26/13**	
111	Schedule Training Webinars	1 wk	Mon 7/15/13	Fri 7/19/13	8
112	Complete Bedrock tasks per this stage of the project. Refer to the Bedrock Process Implementation Guide.	2 wks	Mon 7/15/13	Fri 7/26/13	8
113	Client Prep Session for System Review	1 wk	Mon 7/15/13	Fri 7/19/13	8
114	Ensure the client has completed all Open House Scripts prior to the event.	1 wk	Mon 7/15/13	Fri 7/19/13	8
115	Attend Authorspace Training	1 wk	Mon 7/15/13	Fri 7/19/13	8
116	Plan Version control and project tasks for 3rd party order set vendor	1 wk	Mon 7/15/13	Fri 7/19/13	8
117	Update Project Plan with Zynx training and tasks	1 wk	Mon 7/15/13	Fri 7/19/13	8
118	AttendAuthorspace follow-up training - Integration Best Practices	1 wk	Mon 7/15/13	Fri 7/19/13	8
119	Assess & Schedule Design Coaching Sessions that are needed	1 wk	Mon 7/15/13	Fri 7/19/13	8
120	Complete Domain Tasks	2 wks	Mon 7/15/13	Fri 7/26/13	8
121	Project plan tasks review w/ client team leads - Ensure understanding of deliverable dates/expectations	1 wk	Mon 7/15/13	Fri 7/19/13	8
122	SR Session Evaluation Results Follow-up	1 wk	Mon 7/15/13	Fri 7/19/13	8
123	Facilitate Meaningful Use Review discussion as part of the Welcome Presentation	1 wk	Mon 7/15/13	Fri 7/19/13	8
124	**DESIGN REVIEW**	**2 wks**	**Mon 10/7/13**	**Fri 10/18/13**	
125	Downtime coordination for moving database to permanent hardware	1 wk	Mon 10/7/13	Fri 10/11/13	9

ID	Task Name	Duration	Start	Finish	Predecessors
126	Intellinet/NFuse links creation	1 wk	Mon 10/7/13	Fri 10/11/13	9
127	Ensure monthly Bedrock admin package is installed throughout the project	1 wk	Mon 10/7/13	Fri 10/11/13	9
128	Determine data abstraction and scanning requirements for go live	2 wks	Mon 10/7/13	Fri 10/18/13	9
129	Assess & Schedule Design Coaching Sessions that are needed	1 wk	Mon 10/7/13	Fri 10/11/13	9
130	Complete Domain Tasks	1 wk	Mon 10/7/13	Fri 10/11/13	9
131	Schedule APACHE Outcomes Connectivity Testing	1 wk	Mon 10/7/13	Fri 10/11/13	9
132	**SYSTEM VALIDATION SESSION**	**13 wks**	**Mon 10/7/13**	**Fri 1/3/14**	
133	Confirm TRAIN domain copy has been scheduled	2 wks	Mon 12/16/13	Fri 12/27/13	11
134	Send TRAIN domain regression testing Invite to project team	1 wk	Mon 12/16/13	Fri 12/20/13	11
135	Testing Plan / System Validation Plan	2 wks	Mon 12/16/13	Fri 12/27/13	11
136	Meet with CWx Project Mgr or Client Domain Mgr to discuss domain mgmt strategy and readiness for the event.	3 wks	Fri 12/13/13	Fri 1/3/14	11
137	DELIVERABLE: Design and Build Quality Center Assessments	10 wks	Mon 10/7/13	Fri 12/13/13	9
138	Finalize Test Strategy and Planning	1 wk	Mon 12/16/13	Fri 12/20/13	11
139	Complete Domain Tasks	2 wks	Mon 12/16/13	Fri 12/27/13	11
140	Review issues tracking process with the client	2 wks	Mon 12/16/13	Fri 12/27/13	11
141	Identify Client Maintenance Resources & Update Education Tracking List on MethodM Project Site	1 wk	Mon 12/16/13	Fri 12/20/13	11
142	Training Environment Strategy	3 wks	Mon 12/16/13	Fri 1/3/14	11
143	**TRAINER AND CONVERSION PREP**	**2 wks**	**Mon 2/17/14**	**Fri 2/28/14**	
144	Request the load of needed monthly service packages to be loaded into the BUILD	1 wk	Mon 2/17/14	Fri 2/21/14	12
145	Confirm 2nd TRAIN domain copy has been scheduled	1 wk	Mon 2/17/14	Fri 2/21/14	12
146	Downtime Strategy Planning	2 wks	Mon 2/17/14	Fri 2/28/14	12
147	Conversion Readiness Assessment - Project Management	1 wk	Mon 2/17/14	Fri 2/21/14	12
148	Review Event Summary Report and Objectives from Event Agenda with Cerner Consultant	1 wk	Mon 2/17/14	Fri 2/21/14	12
149	Follow-up on Change Control Process w/ Cerner and Client Team	1 wk	Mon 2/17/14	Fri 2/21/14	12
150	Complete Domain Tasks	1 wk	Mon 2/17/14	Fri 2/21/14	12
151	Schedule APACHE Clinical End-User Training Support	1 wk	Mon 2/17/14	Fri 2/21/14	12
152	Review Conversion Cutover Plan and Update As Needed	1 wk	Mon 2/17/14	Fri 2/21/14	12
153	**MAINTENANCE TRAINING**	**4 wks**	**Mon 3/17/14**	**Fri 4/11/14**	
154	Review Progress of Build Coaching Sessions in the Client Education Tracking List / Ensure all are completed by MT	2 wks	Mon 3/17/14	Fri 3/28/14	13

ID	Task Name	Duration	Start	Finish	Predecessors
155	Meet with CWx Project Mgr or Client Domain Mgr to verify TRAIN domain readiness and client domain access (remote & in KC)	1 wk	Mon 3/17/14	Fri 3/21/14	13
156	Customize conversion cutover plan	2 wks	Mon 3/17/14	Fri 3/28/14	13
157	Complete Domain Tasks	1 wk	Mon 3/17/14	Fri 3/21/14	13
158	Ensure Cerner/Client teams are following the defined change control policy	4 wks	Mon 3/17/14	Fri 4/11/14	13
159	Review/modify conversion cutover plan w/ each Client and Cerner team	3 wks	Mon 3/17/14	Fri 4/4/14	13
160	**INTEGRATION TESTING 1**	**3 wks**	**Mon 4/21/14**	**Fri 5/9/14**	
161	Finalize issue tracking and test script tracking process for IT1	2 wks	Mon 4/21/14	Fri 5/2/14	14
162	Review/distribute final IT scripts to Cerner teams to review in anticipation of Internal IT	1 wk	Mon 4/21/14	Fri 4/25/14	14
163	Downtime Strategy	3 wks	Mon 4/21/14	Fri 5/9/14	14
164	Facilitate Internal Integration Testing w/ Project Team	1 wk	Mon 4/28/14	Fri 5/2/14	14
165	Generate Open Issues Report from Navigator/eService - Work w/ Team to Clean Up Issues	1 wk	Mon 4/21/14	Fri 4/25/14	14
166	Generate Tasks by Event Report and Review with Client	1 wk	Mon 4/21/14	Fri 4/25/14	14
167	Ensure all final design decisions are documented and reviewed by client	1 wk	Mon 4/21/14	Fri 4/25/14	14
168	Begin Conversion Cutover Planning - Customize Cutover Plan & Send to Cerner Team for Review	1 wk	Mon 4/21/14	Fri 4/25/14	14
169	Create a Turnover Activity Plan in Navigator	2 wks	Mon 4/21/14	Fri 5/2/14	14
170	Ensure the client has installed MSA/MTA and it is set up correctly	2 wks	Mon 4/21/14	Fri 5/2/14	14
171	Ensure the client has installed the most recent Admin packages	2 wks	Mon 4/21/14	Fri 5/2/14	14
172	Review all flashes with client (Technical and Priority Review)	2 wks	Mon 4/21/14	Fri 5/2/14	14
173	Review & Update Conversion Readiness Assessment - PrjMgmt	1 wk	Mon 4/28/14	Fri 5/2/14	14
174	**INTEGRATION TESTING 2**	**3 wks**	**Mon 6/9/14**	**Fri 6/27/14**	
175	Ensure Resources are Scheduled for RDDS Cutover Event	1 wk	Mon 6/9/14	Fri 6/13/14	16
176	Prepare and Customize Materials for RDDS Cutover Event	3 wks	Mon 6/9/14	Fri 6/27/14	16
177	Ensure all build changes have been moved to PROD and turn RDDS off	1 wk	Mon 6/9/14	Fri 6/13/14	16
178	Verify MOCK is created from PROD including PROD temp tables	1 wk	Mon 6/9/14	Fri 6/13/14	16
179	Regression test "interim state" in MOCK (Time after RDDS cutover to PROD, but before conv). Coordinate w/ Client to validate existing s.	1 wk	Mon 6/9/14	Fri 6/13/14	16
180	Finalize issue tracking and test script tracking process for IT2	1 wk	Mon 6/9/14	Fri 6/13/14	16
181	Schedule call with SWx APACHE Team for client turnover	1 wk	Mon 6/9/14	Fri 6/13/14	16
182	Schedule call with SWx Team for client turnover	1 wk	Mon 6/9/14	Fri 6/13/14	16

ID	Task Name	Duration	Start	Finish	Predecessors
183	Simulate conversion cutover in MOCK w/ Cerner teams and Cerner/Client technical teams, resetting phase X build to end state. Gather timings for all tasks for PROD cutover.	1 wk	Mon 6/9/14	Fri 6/13/14	16
184	Review Activity Delete Guide on Cerner.com	2 wks	Mon 6/9/14	Fri 6/20/14	16
185	Schedule activity delete in PROD	2 wks	Mon 6/9/14	Fri 6/20/14	16
186	Generate Tasks by Event Report and Review with Client	1 wk	Mon 6/9/14	Fri 6/13/14	16
187	Review Live Production Sign Off form process. Prepare for sign off due 2 weeks post IT2	1 wk	Mon 6/9/14	Fri 6/13/14	16
188	Generate (and load on MethodM site) Event Summary Report and review it and the objectives from the event agenda with the client	1 wk	Mon 6/9/14	Fri 6/13/14	16
189	Review Issues List and identify any Go Live show stopper issues	3 wks	Mon 6/9/14	Fri 6/27/14	16
190	Review client's Internal Services Strategy and set support expectations	3 wks	Mon 6/9/14	Fri 6/27/14	16
191	Register client for ATIM Course (if purchased)	3 wks	Mon 6/9/14	Fri 6/27/14	16
192	Add client contact for remote connectivity questions and support to Navigator as an Intellinet Alert	3 wks	Mon 6/9/14	Fri 6/27/14	16
193	Assist client in defining access policies and procedures	3 wks	Mon 6/9/14	Fri 6/27/14	16
194	Review client information in Intellinet database	3 wks	Mon 6/9/14	Fri 6/27/14	16
195	Cerner code release schedule review	3 wks	Mon 6/9/14	Fri 6/27/14	16
196	Ensure that the Client Help Desk/Technical team roles are identified & have completed all required training	3 wks	Mon 6/9/14	Fri 6/27/14	16
197	Review & Update Conversion Readiness Assessment - PrjMgmt	1 wk	Mon 6/9/14	Fri 6/13/14	16
198	DELIVERABLE: Obtain client sign-off of Live Production Form	2 wks	Mon 6/9/14	Fri 6/20/14	16
199	**CONVERSION**	**5 wks**	**Mon 6/9/14**	**Fri 7/11/14**	
200	DELIVERABLE: Pre-Conversion Quality Center Assessment	4 wks	Mon 6/9/14	Fri 7/4/14	16
201	Confirm facilities, PCs, network access, and sign-ons for conversion staff.	2 wks	Mon 6/30/14	Fri 7/11/14	18
202	Finalize conversion staffing needs and cutover plan.	1 wk	Mon 6/30/14	Fri 7/4/14	18
203	Ensure a Pt. Accounting-only domain is available after conversion to test 835's.	1 wk	Mon 6/30/14	Fri 7/4/14	18
204	Finalize conversion issues triage and tracking process. Verify client help desk coverage.	1 wk	Mon 6/30/14	Fri 7/4/14	18
205	Finalize conversion change control/PECA process.	2 wks	Mon 6/30/14	Fri 7/11/14	18
206	Track show-stopper issues via Go/No Go status report	2 wks	Mon 6/30/14	Fri 7/11/14	18
207	Customize the Solution Turnover documentation and distribute to project team.	2 wks	Mon 6/30/14	Fri 7/11/14	18

ID	Task Name	Duration	Start	Finish	Predecessors
208	Coordinate Diagnostic Center Reviews Across the Teams	1 wk	Mon 6/30/14	Fri 7/4/14	18
209	Send conversion guide and logistics to team. Ensure travel is booked.	1 wk	Mon 6/30/14	Fri 7/4/14	18
210	Client training on logging and tracking service records has been completed and communicated	2 wks	Mon 6/30/14	Fri 7/11/14	18
211	Ensure any Entitlements are added to client information.	2 wks	Mon 6/30/14	Fri 7/11/14	18
212	Client has a defined and documented change management strategy and process in place	2 wks	Mon 6/30/14	Fri 7/11/14	18
213	Validate that client's service and maintenance contracts are complete.	2 wks	Mon 6/30/14	Fri 7/11/14	18
214	Validate that Cerner application license fees for all solutions have been activated	2 wks	Mon 6/30/14	Fri 7/11/14	18
215	Ensure that all backup procedures are defined, documented, and tested.	2 wks	Mon 6/30/14	Fri 7/11/14	18
216	Document any custom code in the client's environment, and set expectations regarding Cerner support.	2 wks	Mon 6/30/14	Fri 7/11/14	18
217	Schedule Architecture, Troubleshooting and Issue Management course	1 wk	Mon 6/30/14	Fri 7/4/14	18
218	Provide Operation Stage guide to client	1 wk	Mon 6/30/14	Fri 7/4/14	18
219	**CONVERSION - Rollout1 Ambulatory**	**2 wks**	**Mon 6/30/14**	**Fri 7/11/14**	
220	Reduce clinic schedules	5 days	Mon 6/30/14	Fri 7/4/14	18
221	Confirm facilities, PCs, network access, and sign-ons for conversion staff.	2 wks	Mon 6/30/14	Fri 7/11/14	18
222	Ensure scanners are in place for abstraction team	1 day	Mon 6/30/14	Mon 6/30/14	18
223	Track show-stopper issues via Go/No Go status report	2 wks	Mon 6/30/14	Fri 7/11/14	18
224	Send conversion guide and logistics to team. Ensure travel is booked.	1 wk	Mon 6/30/14	Fri 7/4/14	18
225	Begin data abstraction at clinics	5 days	Mon 6/30/14	Fri 7/4/14	18
226	**POST CONVERSION REVIEW**	**16 wks**	**Mon 6/30/14**	**Fri 10/17/14**	
227	DELIVERABLE: Quality Center Post Conversion Assessment	4 wks	Mon 6/30/14	Fri 7/25/14	18
228	DELIVERABLE: Post Conversion Assessment Survey	1 wk	Mon 7/21/14	Fri 7/25/14	18FS+3 wks
229	DELIVERABLE: Post Conversion Assessment - PM	1 wk	Mon 9/15/14	Fri 9/19/14	24
230	Track Meaningful Use Functional reports for compliance	2 wks	Mon 9/15/14	Fri 9/26/14	24
231	Perform APACHE Report Training	1 wk	Mon 9/15/14	Fri 9/19/14	24
232	Coordinate Post Conversion Assessment Results Review Calls	1 wk	Mon 9/15/14	Fri 9/19/14	24
233	Close out Project	1 wk	Mon 9/15/14	Fri 9/19/14	24
234	Customize Turnover Presentation & Agenda to be presented on the Turnover call	2 wks	Mon 9/15/14	Fri 9/26/14	24
235	Schedule Support Turnover call	2 wks	Mon 9/15/14	Fri 9/26/14	24
236	Attach project plan to Turnover Activity Plan in Navigator	3 wks	Mon 9/15/14	Fri 10/3/14	24

ID	Task Name	Duration	Start	Finish	Predecessors
237	Compile documentation and/or audit of MethodM tasks for Turnover to review on Turnover call.	3 wks	Mon 9/15/14	Fri 10/3/14	24
238	Complete Turnover activity in Navigator on completion on MethodM activities	5 wks	Mon 9/15/14	Fri 10/17/14	24
239	**Task 7 Conduct Project Close-out Activities**	**1 wk**	**Mon 11/30/15**	**Fri 12/4/15**	**32**
240	Subtask 7.1 Develop Project Close-out Checklist	1 wk	Mon 11/30/15	Fri 12/4/15	
241	Subtask 7.2 Conduct Project Close-out	0.5 days	Mon 11/30/15	Mon 11/30/15	
242	**ADOPTION**	**90 wks**	**Mon 1/28/13**	**Fri 10/17/14**	
243	**Task 1 Conduct Governance Assessments**	**17 wks**	**Mon 1/28/13**	**Fri 5/24/13**	
244	Attend Clinical Nursing Leadership Breakout Session / Strategic Assessment Results	1 wk	Mon 2/4/13	Fri 2/8/13	2FS+1 mon
245	Attend Physician Session - Physician Outcomes	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon
246	Deliver Sample Physician Advisory Group Charter	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon
247	Discuss Physician Adoption Responsibility Communication (review template letter)	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon
248	Introduce Influential Physician Tracking Tool	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon
249	Conduct Influential Physician Tracking	7 wks	Mon 1/28/13	Fri 3/15/13	2FS+1 mon
250	Identify Communication Needs for Stakeholder Groups	4 wks	Mon 4/8/13	Fri 5/3/13	4
251	Identify Responsibilities for Oversight and Advisory Teams	2 wks	Mon 4/8/13	Fri 4/19/13	4
252	Identify Responsibilities for Change Leaders from Nursing/Medicine/Surgery/Therapies/Ancillaries	2 wks	Mon 4/8/13	Fri 4/19/13	4
253	Prepare Benefits PowerPoint and Spreadsheet for Benefits Workshop	1 wk	Mon 4/8/13	Fri 4/12/13	4
254	Provide Lighhtouse value plan for Benefits Workshop	2 wks	Mon 4/8/13	Fri 4/19/13	4
255	Submit Physician Committees and Standing Meetings	4 wks	Mon 4/8/13	Fri 5/3/13	4
256	Physician Advisory Group Project Charter	7 wks	Mon 4/8/13	Fri 5/24/13	4
257	**Strategic Assessment/Stakeholder Analysis**	**8 wks**	**Mon 1/28/13**	**Fri 3/22/13**	**2**
258	Set up Strategic Assessment Interviews / Identify Stakeholders to Survey	1 wk	Mon 2/18/13	Fri 2/22/13	4SS-6 wks
259	Prep for Strategic Assessment	1 wk	Mon 2/18/13	Fri 2/22/13	4SS-6 wks
260	Distribute Strategic Assessment Survey	1 wk	Mon 2/18/13	Fri 2/22/13	4SS-6 wks
261	Complete Strategic Assessment Surveys/Interviews	1 wk	Mon 2/18/13	Fri 2/22/13	4SS-6 wks
262	Review Imperatives and Benefits Set in Sales Cycle	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon
263	Create Initial Client-Customized Benefits List and Review w/ Client Stakeholders	1 wk	Mon 1/28/13	Fri 2/1/13	2FS+1 mon

ID	Task Name	Duration	Start	Finish	Predecessors
264	Complete Strategic Assessment Survey	1 wk	Mon 3/11/13	Fri 3/15/13	4SS-3 wks
265	Analyze Strategic Assessment Results	1 wk	Mon 3/11/13	Fri 3/15/13	4SS-3 wks
266	Prepare Strategic Assessment Summary.ppt	1 wk	Mon 3/18/13	Fri 3/22/13	4SS-2 wks
267	Deliver Strategic Assessment Results	1 wk	Mon 3/18/13	Fri 3/22/13	4SS-2 wks
268	**Task 4 Conduct Communications Strategy Review**	**4 wks**	**Mon 4/29/13**	**Fri 5/24/13**	**5**
269	Subtask 4.1 Conduct Communications Strategy Review	4 wks	Mon 4/29/13	Fri 5/24/13	
270	**PROJECT KICKOFF**	**6 wks**	**Mon 4/29/13**	**Fri 6/7/13**	**5**
271	Identify clinical leadership	1 wk	Fri 5/10/13	Thu 5/16/13	
272	Form clinical oversight group	1 wk	Fri 5/10/13	Thu 5/16/13	
273	Conduct Governance Review Checkpoint	1 wk	Mon 4/29/13	Fri 5/3/13	
274	Schedule and meet to review Client's completed PDA	1 wk	Mon 4/29/13	Fri 5/3/13	
275	Present Preliminary Benefits Plan to Internal Team, Complete Post to MethodM Project Site	1 wk	Mon 4/29/13	Fri 5/3/13	
276	Complete Zynx Benefits Webinars	1 day	Mon 4/29/13	Mon 4/29/13	
277	Synchronize with Cerner Physician resources for project sessions and onsite visits.	1 day	Mon 5/20/13	Mon 5/20/13	7
278	Attend Benefits Workshop	1 wk	Mon 5/20/13	Fri 5/24/13	7
279	Conduct and Attend Benefits Workshop	1 wk	Mon 5/20/13	Fri 5/24/13	7
280	Confirm Zynx Benefits metrics have been decided by client	1 wk	Mon 5/20/13	Fri 5/24/13	7
281	Development of Physician Advisory Group Charter	3 wks	Mon 5/20/13	Fri 6/7/13	7
282	Finalized Benefits Plan	2 wks	Mon 4/29/13	Fri 5/10/13	
283	**Task 5 Review Organizational Change Management Strategy**	**7 wks**	**Mon 6/10/13**	**Fri 7/26/13**	**270**
284	Subtask 5.1 Conduct Organizational Change Management (OCM) Strategy Review	1 wk	Mon 6/10/13	Fri 6/14/13	
285	**SYSTEM REVIEW**	**37 wks**	**Mon 5/20/13**	**Fri 1/31/14**	**7**
286	Prepare Benefits Presentation for System Review	1 wk	Mon 5/20/13	Fri 5/24/13	
287	Schedule Meeting to Review SR Agenda & Role Responsibilities	1 wk	Mon 5/20/13	Fri 5/24/13	
288	Finalize device strategy and execution for physicians	29 wks	Mon 7/15/13	Fri 1/31/14	8
289	Attend Order Set Development Workshop	1 wk	Mon 7/15/13	Fri 7/19/13	8
290	Schedule Workflow Localization Sessions	1 wk	Mon 7/15/13	Fri 7/19/13	8
291	**DESIGN REVIEW**	**13 wks**	**Mon 7/15/13**	**Fri 10/11/13**	**8**
292	Schedule Meeting to Review DR Agenda & Role Responsibilities	1 wk	Mon 7/15/13	Fri 7/19/13	
293	Review Clinical Note Hierarchy (Core Deliverable)	6 wks	Mon 7/15/13	Fri 8/23/13	
294	Review Meds Integration DDM	1 wk	Mon 7/15/13	Fri 7/19/13	

ID	Task Name	Duration	Start	Finish	Predecessors
295	PowerNotes: Decide which pathways to use	5 wks	Mon 7/15/13	Fri 8/16/13	
296	PowerNotes: Review pathway content	5 wks	Mon 7/15/13	Fri 8/16/13	
297	Update downtime procedures, medical staff bylaws, and policies/procedures	13 wks	Mon 7/15/13	Fri 10/11/13	
298	Job Impact Analysis	1 wk	Mon 7/15/13	Fri 7/19/13	
299	Benefits plan with baseline measurements	2 wks	Mon 7/15/13	Fri 7/26/13	
300	**Workflow Localization Physician**	**2 wks**	**Mon 7/15/13**	**Fri 7/26/13**	
301	Attend Workflow Localization Work Groups	2 wks	Mon 7/15/13	Fri 7/26/13	
302	Attend Workflow Localization Work Groups	2 wks	Mon 7/15/13	Fri 7/26/13	
303	Workflow Localization Presentation.ppt	1 wk	Mon 7/15/13	Fri 7/19/13	
304	Workflow Localization Future State Visio Diagrams	1 wk	Mon 7/15/13	Fri 7/19/13	
305	Attend Workflow Localization Presentation	1 day	Mon 7/15/13	Mon 7/15/13	
306	**Workflow Localization Nursing and Ancillary**	**10 wks**	**Mon 7/15/13**	**Fri 9/20/13**	
307	Attend Workflow Localization Work Groups	6 wks	Mon 7/15/13	Fri 8/23/13	
308	Workflow Localization Presentation.ppt	10 wks	Mon 7/15/13	Fri 9/20/13	
309	Workflow Localization Future State Visio Diagrams	10 wks	Mon 7/15/13	Fri 9/20/13	
310	Attend Workflow Localization Presentation	1 day	Mon 7/15/13	Mon 7/15/13	
311	**SYSTEM VALIDATION SESSION**	**22 wks**	**Mon 10/7/13**	**Fri 3/7/14**	**9**
312	Schedule Meeting to Review SVS Agenda & Role Responsibilities	1 wk	Mon 10/7/13	Fri 10/11/13	
313	Update policy and procedures related to Meaningful Use	4 wks	Mon 10/7/13	Fri 11/1/13	
314	Review and optimize generic future state physician workflows	12 wks	Mon 12/16/13	Fri 3/7/14	11
315	Physician-based Integration Test Scripts for CPOE/PowerNote	11 wks	Mon 12/16/13	Fri 2/28/14	11
316	**TRAINER AND CONVERSION PREP**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	**11**
317	Training Checkpoint: Review Training Manual Against Workflow Localization Training Impacts	1 wk	Mon 12/16/13	Fri 12/20/13	
318	Policy and Procedure and Benefits Checkpoint Call	1 wk	Mon 12/16/13	Fri 12/20/13	
319	Review conversion plan	1 wk	Mon 12/16/13	Fri 12/20/13	
320	Complete and collaborate Physician Adoption Conversion Readiness Assessment including issue and enhancement management plan	1 wk	Mon 12/16/13	Fri 12/20/13	
321	Conduct Conversion Readiness Assessment Interviews	1 wk	Mon 12/16/13	Fri 12/20/13	
322	Review physician learning plan	3 wks	Mon 12/16/13	Fri 1/3/14	
323	Develop a plan to incent resistor or slow adopting physicians	2 wks	Mon 12/16/13	Fri 12/27/13	
324	Conversion Readiness Assessment	1 wk	Mon 2/17/14	Fri 2/21/14	12
325	Leading Strategic Change check point #3	5 days	Mon 2/17/14	Fri 2/21/14	12

ID	Task Name	Duration	Start	Finish	Predecessors
326	**INTEGRATION TESTING 1**	**1 wk**	**Mon 4/14/14**	**Fri 4/18/14**	**14SS**
327	Review Integration Test Scripts for Workflow and Process Steps	1 wk	Mon 4/14/14	Fri 4/18/14	
328	**CONVERSION**	**2 wks**	**Mon 6/9/14**	**Fri 6/20/14**	**16**
329	PowerNotes: Build macros and precompleted notes	2 wks	Mon 6/9/14	Fri 6/20/14	
330	**CONVERSION - Rollout1 Ambulatory**	**0.2 wks**	**Mon 6/9/14**	**Mon 6/9/14**	**16**
331	Create data abstraction and scanning guide	1 day	Mon 6/9/14	Mon 6/9/14	
332	Determine resource requirements for data abstraction and scanning	1 day	Mon 6/9/14	Mon 6/9/14	
333	**POST CONVERSION REVIEW**	**2 wks**	**Mon 10/6/14**	**Fri 10/17/14**	**34SS**
334	Complete Post Conversion Assessment Workbook.xls	2 wks	Mon 10/6/14	Fri 10/17/14	24FS+3 wks
335	Leading Strategic Change check point #5	10 days	Mon 10/6/14	Fri 10/17/14	24FS+3 wks
336	Contract Initiation Event	0 days	Sat 12/29/12	Sat 12/29/12	2
337	**SOW #2 - Project Initiation**	**125.2 wks**	**Fri 12/21/12**	**Fri 5/15/15**	
338	**Task 1: Provide Input to Project Charter**	**2 wks**	**Mon 5/4/15**	**Fri 5/15/15**	
339	Subtask 1.1 Provide Input to Project Charter	2 wks	Mon 5/4/15	Fri 5/15/15	80FF
340	**Task 2: Provide Input to Project Governance**	**2 wks**	**Mon 5/13/13**	**Fri 5/24/13**	
341	Subtask 2.1 Provide Input to Project Governance Structure	2 wks	Mon 5/13/13	Fri 5/24/13	243FF
342	Subtask 2.2 Provide Input to Project Governance Processes	2 wks	Mon 5/13/13	Fri 5/24/13	243FF
343	**Task 3: Identify Stakeholders**	**6 wks**	**Fri 12/21/12**	**Thu 1/31/13**	
344	Subtask 3.1 Identify Stakeholders	6 wks	Fri 12/21/12	Thu 1/31/13	
345	**Task 4: Complete Project Control Document**	**6 wks**	**Fri 12/21/12**	**Thu 1/31/13**	
346	Subtask 4.1 Develop Project Control Document Framework	6 wks	Fri 12/21/12	Thu 1/31/13	
347	Subtask 4.2 Develop Project Work Plan (PWP)	6 wks	Fri 12/21/12	Thu 1/31/13	
348	Subtask 4.3 Develop Error Management Plan (EMP)	6 wks	Fri 12/21/12	Thu 1/31/13	
349	Subtask 4.4 Develop Project Communications Strategy	6 wks	Fri 12/21/12	Thu 1/31/13	
350	Subtask 4.5 Develop Risk Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
351	Subtask 4.6 Develop Project Staffing and Resource Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
352	Subtask 4.7 Develop Configuration and Technology Change Management Plan (CTCMP)	6 wks	Fri 12/21/12	Thu 1/31/13	
353	Subtask 4.8 Develop Issue Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
354	Subtask 4.9 Develop Project Change Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
355	Subtask 4.10 Develop Quality Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
356	Subtask 4.11 Develop Deliverables Management Plan	6 wks	Fri 12/21/12	Thu 1/31/13	
357	Subtask 4.12: Develop Procedures for Status Meetings / reporting	6 wks	Fri 12/21/12	Thu 1/31/13	

ID	Task Name	Duration	Start	Finish	Predecessors
358	Subtask 4.13: Develop Project Control Document	6 wks	Fri 12/21/12	Thu 1/31/13	
359	**Task 5: Develop Technology Strategy**	**4 wks**	**Mon 4/29/13**	**Fri 5/24/13**	
360	Subtask 5.1 Conduct Technical Assessment	1 wk	Mon 4/29/13	Fri 5/3/13	502SS
361	Subtask 5.2 Develop Technology Strategy	3 wks	Mon 5/6/13	Fri 5/24/13	360
362	**Task 6: Develop Strategic Assessment and Organization Change Management (OCM) Strategy**	**4 wks**	**Mon 6/10/13**	**Fri 7/5/13**	
363	Subtask 6.1 Conduct Strategic Assessment	2 wks	Mon 6/10/13	Fri 6/21/13	284SS
364	Subtask 6.2: Develop Organizational Change Management (OCM) Strategy	2 wks	Mon 6/24/13	Fri 7/5/13	363
365	**Task 7: Develop Knowledge Transfer Strategy**	**8 wks**	**Mon 9/23/13**	**Fri 11/15/13**	
366	Subtask 7.1 Develop Knowledge Transfer Strategy	2 mons	Mon 9/23/13	Fri 11/15/13	436SS-3 mons
367	**Task 8: Develop End-User Training Strategy**	**8 wks**	**Mon 9/23/13**	**Fri 11/15/13**	
368	Subtask 8.1 Develop End-User Training Strategy	2 mons	Mon 9/23/13	Fri 11/15/13	436SS-3 mons
369	**Task 9: Develop Testing Strategy**	**4 wks**	**Mon 4/21/14**	**Fri 5/16/14**	
370	Subtask 9.1 Develop Testing Strategy	1 mon	Mon 4/21/14	Fri 5/16/14	160SS
371	**Task 10: Develop Security Strategy**	**4 wks**	**Mon 4/21/14**	**Fri 5/16/14**	
372	Subtask 10.1 Develop Security Strategy	1 mon	Mon 4/21/14	Fri 5/16/14	160SS
373	**Task 11: Conduct County Executive Session**	**1 wk**	**Mon 2/11/13**	**Fri 2/15/13**	
374	Subtask 11.1 Conduct County Executive Session	1 wk	Mon 2/11/13	Fri 2/15/13	243SS+2 wks
375	**Task 12: Conduct Project Preparation Sessions**	**10 wks**	**Mon 3/4/13**	**Fri 5/10/13**	
376	Subtask 12.1 Conduct Project Management Workshop	1 wk	Mon 3/4/13	Fri 3/8/13	373FS+2 wks
377	Subtask 12.2 Conduct Project Team Workshop	1 wk	Mon 3/11/13	Fri 3/15/13	376
378	Subtask 12.3 Conduct PC Basics Course	1 wk	Mon 3/18/13	Fri 3/22/13	377
379	Subtask 12.4 Conduct Solution Build and Maintain Course	1 wk	Mon 3/25/13	Fri 3/29/13	378
380	Subtask 12.5 Conduct Solution and Tools Introduction Workshop	1 wk	Mon 4/1/13	Fri 4/5/13	379
381	Subtask 12.6 Conduct Licensed Software and Third Party Products Fundamentals Course	1 wk	Mon 4/8/13	Fri 4/12/13	380
382	Subtask 12.7 Conduct Clinical and Business Process Analysis Training	1 wk	Mon 4/15/13	Fri 4/19/13	381
383	Subtask 12.8 Conduct IT Analyst Prep Sessions	1 wk	Mon 4/22/13	Fri 4/26/13	382
384	Subtask 12.9 Conduct Physician & Nursing (Clinician) Sessions	1 wk	Mon 4/29/13	Fri 5/3/13	383
385	Subtask 12.10 Conduct Leading Strategic Change Workshop	1 wk	Mon 5/6/13	Fri 5/10/13	384
386	**Task 13: Conduct Project Kickoff**	**1 wk**	**Mon 5/20/13**	**Fri 5/24/13**	
387	Subtask 13.1 Conduct Project Kickoff	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
388	Completion of Project Initiation (completion of L.A. event)	0 days	Fri 5/24/13	Fri 5/24/13	505,671,846,1829,214

ID	Task Name	Duration	Start	Finish	Predecessors
389	**SOW #21 - EHR System Testing**	**52 wks**	**Mon 5/13/13**	**Fri 5/9/14**	
390	**Task 1 Conduct SOW Kick-off**	**1 wk**	**Mon 5/13/13**	**Fri 5/17/13**	
391	Subtask 1.1 Develop Sub-Project Work Plan for Integration Testing and User Acceptance Testing	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
392	Subtask 1.2 Conduct Initiation Session for Integration Testing and User Acceptance Testing Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
393	**Task 2 Develop Test Plan**	**4 wks**	**Mon 3/17/14**	**Fri 4/11/14**	
394	Subtask 2.1 Develop Test Plan	1 mon	Mon 3/17/14	Fri 4/11/14	160FS-2 mons
395	**Task 3 Implement Test Tools and Test Environment and Conduct Training**	**4 wks**	**Mon 3/17/14**	**Fri 4/11/14**	
396	Subtask 3.1 Implement Test Tools and Test Environment and Conduct Training	1 mon	Mon 3/17/14	Fri 4/11/14	160FS-2 mons
397	Task 4 Develop Test Scripts	1 mon	Mon 3/17/14	Fri 4/11/14	160FS-2 mons
398	Subtask 4.1 Develop Test Scripts, Test Scenarios, Test Cycles and Common Test Data	1 mon	Mon 3/17/14	Fri 4/11/14	160FS-2 mons
399	**Task 5 Perform Integration Testing**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	
400	Subtask 5.1 Identify Integration Test Scripts, Test Scenarios, Test Cycles and Common Test Data	2 wks	Mon 4/14/14	Fri 4/25/14	398
401	Subtask 5.2 Perform Integration Testing	3 wks	Mon 4/21/14	Fri 5/9/14	400FS-5 days
402	**Task 6 Perform User Acceptance Testing**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	
403	Subtask 6.1 Identify User Acceptance Test Scripts, Test Scenarios, Test Cycles and Common Test Data	2 wks	Mon 4/14/14	Fri 4/25/14	398
404	Subtask 6.2 Perform User Acceptance Testing	3 wks	Mon 4/21/14	Fri 5/9/14	403FS-5 days
405	**Task 7 Perform Compliance Testing**	**3 wks**	**Mon 4/21/14**	**Fri 5/9/14**	
406	Subtask 7.1 Perform Compliance Testing	3 wks	Mon 4/21/14	Fri 5/9/14	403FS-5 days
407	**Task 8 Perform Regression Testing**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	
408	Subtask 8.1 Identify Regression Test Scripts, Test Scenarios, Test Cycles and Common Test Data	2 wks	Mon 4/14/14	Fri 4/25/14	398
409	Subtask 8.2 Support Regression Testing	3 wks	Mon 4/21/14	Fri 5/9/14	408FS-5 days
410	**Task 9 Perform Load Testing**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	
411	Subtask 9.1 Identify Load Test Scripts, Test Scenarios, Test Cycles and Common Test Data	2 wks	Mon 4/14/14	Fri 4/25/14	398
412	Subtask 9.2 Support Load Testing	3 wks	Mon 4/21/14	Fri 5/9/14	411FS-5 days
413	**Task 10 Perform Parallel Testing**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
414	Subtask 10.1 Identify Parallel Test Scripts, Test Scenarios, Test Cycles and Common Test Data	2 wks	Mon 4/14/14	Fri 4/25/14	398
415	Subtask 10.2 Support Parallel Testing	3 wks	Mon 4/21/14	Fri 5/9/14	414FS-5 days
416	**SOW #22 - Training and Knowledge Transfer (LEARNING)**	**99 wks**	**Mon 12/24/12**	**Fri 11/14/14**	
417	**Task 1 Conduct SOW Kick-off**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
418	Subtask 1.1 Develop Sub-Project Work Plan for Training and Knowledge Transfer	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
419	Subtask 1.2 Initiation Session for Training and Knowledge Transfer Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
420	**Task 2 Develop Master Training Program (ADOPTION STRATEGY)**	**31 wks**	**Mon 12/31/12**	**Fri 8/2/13**	
421	Select Physician Champion(s)	1 wk	Mon 12/31/12	Fri 1/4/13	2
422	Select Nursing Champion(s)	1 wk	Mon 12/31/12	Fri 1/4/13	2
423	Select Ancillary Champion(s)	1 wk	Mon 12/31/12	Fri 1/4/13	2
424	Select Learning Manager	1 wk	Mon 12/31/12	Fri 1/4/13	2
425	Select Super Users	1 wk	Mon 4/29/13	Fri 5/3/13	5
426	Select Trainers	1 wk	Mon 4/29/13	Fri 5/3/13	5
427	Subtask 2.1 Develop and Maintain Master Training Program (Develop Adoption and Learning Plan)	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
428	Subtask 2.2 Provide a Web Based Training (WBT) Curriculum	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
429	Subtask 2.3 Develop Instructor-Led Training Framework	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
430	Subtask 2.4 Develop Knowledge Transfer Plan	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
431	Subtask 2.5 Develop Training Development Standards	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
432	**Task 3 Develop, Install and Maintain the County Training Environment**	**14 wks**	**Mon 6/24/13**	**Fri 9/27/13**	
433	Subtask 3.1 Develop Plan for the Training Environment	6 wks	Mon 6/24/13	Fri 8/2/13	8FS-3 wks
434	Subtask 3.2 Install and Maintain the County Training Environment	2 mons	Mon 8/5/13	Fri 9/27/13	433
435	**Task 4 Develop Training and Support Materials (LEARNING DEVELOPMENT)**	**23.2 wks**	**Mon 12/16/13**	**Mon 5/26/14**	
436	Subtask 4.1 Develop Training Materials (Initiate Learning Plan)	1 wk	Mon 12/16/13	Fri 12/20/13	11
437	Custom Training Materials: Learning Task Analysis	1 wk	Mon 12/23/13	Fri 12/27/13	11,436
438	Custom e-Learning: Learning Task Analysis	1 wk	Mon 12/23/13	Fri 12/27/13	11,436
439	Develop Custom Training Materials	4 wks	Mon 12/30/13	Fri 1/24/14	437,438
440	Subtask 4.2 Implement and Deploy the LearningLIVE environment (TRAIN Domain Population)	5 wks	Tue 4/22/14	Mon 5/26/14	15
441	e-Learning Asset Development	4 wks	Mon 12/30/13	Fri 1/24/14	438
442	LearningLIVE Design	6 wks	Mon 12/30/13	Fri 2/7/14	437,438

ID	Task Name	Duration	Start	Finish	Predecessors
443	Define Learning Management System Administration	1 wk	Tue 4/22/14	Mon 4/28/14	15
444	**Task 5 Develop Training and Knowledge Transfer Schedule**	**4 wks**	**Tue 4/29/14**	**Mon 5/26/14**	
445	Subtask 5.1 Develop Training and Knowledge Transfer Schedule	4 wks	Tue 4/29/14	Mon 5/26/14	443
446	**Task 6 Conduct Implementation Team Training (LEARNING DELIVERY)**	**8 wks**	**Mon 5/19/14**	**Fri 7/11/14**	
447	Subtask 6.1 Conduct Implementation Team Training (Facilitate Learning Lab/ Instructor-Led Training events)	8 wks	Mon 5/19/14	Fri 7/11/14	18FS-6 wks
448	Deploy Physician Concierge Services	2 wks	Mon 6/16/14	Fri 6/27/14	18FS-2 wks
449	**Task 7 Conduct Train-the-Trainer and Super User Training**	**3 wks**	**Mon 7/14/14**	**Fri 8/1/14**	
450	Subtask 7.1 Conduct Train-the-Trainer and Super User Training	3 wks	Mon 7/14/14	Fri 8/1/14	447
451	**Task 8 Conduct End-User Training**	**5 wks**	**Mon 8/4/14**	**Fri 9/5/14**	
452	Subtask 8.1 Conduct End-User Training	2 wks	Mon 8/4/14	Fri 8/15/14	450
453	Subtask 8.2 Conduct End-User Survey and Develop End-User Training Effectiveness Reports	2 wks	Mon 8/18/14	Fri 8/29/14	452
454	Subtask 8.3 Post Go-Live Evaluation of Training Efficacy	1 wk	Mon 9/1/14	Fri 9/5/14	453
455	**Task 9 Conduct Support Team Training**	**30 wks**	**Mon 9/16/13**	**Fri 4/11/14**	
456	Subtask 9.1 Develop Help Desk Scripts	3 wks	Mon 9/16/13	Fri 10/4/13	434FS-2 wks
457	Subtask 9.2 Conduct Support Training	1 mon	Mon 2/17/14	Fri 3/14/14	568SS
458	Subtask 9.3 Conduct Coaching Sessions for County Staff Responsible for Maintaining System	1 mon	Mon 3/17/14	Fri 4/11/14	457
459	**Task 10 Conduct Dashboards, Custom Reporting, and Data Analytics Training**	**8 wks**	**Mon 8/11/14**	**Fri 10/3/14**	
460	Subtask 10.1 Conduct Dashboards, Custom Reporting, and Data Analytics Training	1 mon	Mon 8/11/14	Fri 9/5/14	1050
461	Subtask 10.2 Conduct Coaching Sessions for Data Analytics and Report Writing Team	1 mon	Mon 9/8/14	Fri 10/3/14	460
462	**CONVERSION SUPPORT**	**2 wks**	**Mon 6/30/14**	**Fri 7/11/14**	
463	Utilize Physician Concierge Services	2 wks	Mon 6/30/14	Fri 7/11/14	18
464	Conversion Coaching	2 wks	Mon 6/30/14	Fri 7/11/14	18
465	Monitor LearningLIVE	2 wks	Mon 6/30/14	Fri 7/11/14	18
466	**CONTINUOUS ADOPTION IMPROVEMENT**	**20 wks**	**Mon 6/30/14**	**Fri 11/14/14**	
467	Physician Coaching	10 wks	Mon 7/14/14	Fri 9/19/14	18FS+2 wks
468	Adoption Reporting	4 wks	Mon 6/30/14	Fri 7/25/14	18
469	Maintain LearningLIVE	4 wks	Mon 7/14/14	Fri 8/8/14	18FS+2 wks
470	Materials Revisions	4 wks	Mon 8/25/14	Fri 9/19/14	18FS+8 wks
471	Behavior Change Plan Evaluation	4 wks	Mon 10/20/14	Fri 11/14/14	18FS+16 wks

ID	Task Name	Duration	Start	Finish	Predecessors
472	**SOW #3 - EHR Architecture and Hosting Services**	**132 wks**	**Mon 12/31/12**	**Fri 7/10/15**	
473	**CLIENT EXECUTIVE SESSION**	**10 wks**	**Mon 12/31/12**	**Fri 3/8/13**	**2**
474	Complete Lighthouse Reporting Infrastructure Review	1 wk	Mon 12/31/12	Fri 1/4/13	
475	Complete Hardware Review	1 wk	Mon 12/31/12	Fri 1/4/13	
476	Order Hardware	1 wk	Mon 2/4/13	Fri 2/8/13	475SS+5 wks
477	Order End-user Devices, if applicable	1 wk	Mon 2/4/13	Fri 2/8/13	475SS+5 wks
478	Perform Technical Scope Review	2 wks	Mon 2/11/13	Fri 2/22/13	2FS+6 wks
479	Technical Fitness	1 wk	Mon 2/11/13	Fri 2/15/13	2FS+6 wks
480	Schedule Technical Startup Call - Attach Agenda to Invite	1 wk	Mon 2/11/13	Fri 2/15/13	2FS+6 wks
481	Confirm Sizing of Backend Hardware	1 wk	Mon 2/11/13	Fri 2/15/13	2FS+6 wks
482	Order, Stage, and Ship PACS Servers	1 wk	Mon 2/11/13	Fri 2/15/13	2FS+6 wks
483	Configure in Staging Facility - KC	1 wk	Mon 2/18/13	Fri 2/22/13	482
484	Ship / Receive Servers on Client Site	2 wks	Mon 2/25/13	Fri 3/8/13	483
485	Order, Stage, and Ship PACS Workstations	1 wk	Mon 2/11/13	Fri 2/15/13	2FS+6 wks
486	Configure in Staging Facility - KC	1 wk	Mon 2/18/13	Fri 2/22/13	485
487	Ship / Receive Workstations on Client Site	2 wks	Mon 2/25/13	Fri 3/8/13	486
488	**PROJECT PREPARATION**	**3 wks**	**Mon 4/8/13**	**Fri 4/26/13**	**4**
489	Schedule resources for BUILD domain creation	1 wk	Mon 4/8/13	Fri 4/12/13	
490	Optum Insight Technical Requirements Review	1 wk	Mon 4/8/13	Fri 4/12/13	4
491	**Migration Tasks**	**3 wks**	**Mon 4/8/13**	**Fri 4/26/13**	
492	Deliver Migration Review Session	1 wk	Mon 4/8/13	Fri 4/12/13	
493	Migration - Classic PSID Extract Audits PECA	1 wk	Mon 4/8/13	Fri 4/12/13	
494	Review and sign Migration - Classic PSID Extract Audit PECA	1 wk	Mon 4/8/13	Fri 4/12/13	
495	Schedule resource to perform Classic Migration audits	1 wk	Mon 4/8/13	Fri 4/12/13	
496	Run Classic Migration Audits	3 wks	Mon 4/8/13	Fri 4/26/13	
497	Schedule Classic Migration Audit Review Sessions	1 wk	Mon 4/8/13	Fri 4/12/13	
498	Attend Classic Migration Audit Review Session	1 wk	Mon 4/8/13	Fri 4/12/13	
499	Coordinate Evaluation of Classic Migration Audits	1 wk	Mon 4/8/13	Fri 4/12/13	
500	Schedule monthly Classic Migration Audit Review Sessions with client	1 wk	Mon 4/8/13	Fri 4/12/13	
501	**Task 1 Conduct SOW Kick-off**	**5 wks**	**Mon 4/29/13**	**Fri 5/31/13**	**5**
502	Technical Site Readiness	1 wk	Mon 4/29/13	Fri 5/3/13	
503	Review Cerner Etreby server setup strategy	2 wks	Mon 5/20/13	Fri 5/31/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
504	Subtask 1.1 Develop Sub-Project Work Plan for EHR Architecture and Hosting Services	1 wk	Mon 4/29/13	Fri 5/3/13	347SS
505	Subtask 1.2 Conduct Initiation Session for EHR Architecture and Hosting Services Workgroup	2 wks	Mon 4/29/13	Fri 5/10/13	
506	**SYSTEM REVIEW**	**10.2 wks**	**Mon 5/20/13**	**Mon 7/29/13**	**7**
507	Schedule technical support for System Review Event	1 wk	Mon 5/20/13	Fri 5/24/13	
508	Schedule resources for PROD Domain creation	1 wk	Mon 5/20/13	Fri 5/24/13	
509	BUILD: Domain Replication from PROD	1 wk	Mon 5/20/13	Fri 5/24/13	
510	Request the load of applicable content packages.	12 days	Mon 5/20/13	Tue 6/4/13	
511	Ensure that Multum is being updated on a monthly basis (server content and order catalog)	1 wk	Mon 5/20/13	Fri 5/24/13	
512	Install CBO Updates in BUILD Domain	1 wk	Mon 5/20/13	Fri 5/24/13	
513	Conduct Technical Review Project Call	1 wk	Mon 5/20/13	Fri 5/24/13	
514	Order HNAM software	1 wk	Mon 7/15/13	Fri 7/19/13	8
515	PROD Domain Installation	6 days	Mon 7/15/13	Mon 7/22/13	8
516	PROD Domain - Service Sentry	1 wk	Tue 7/23/13	Mon 7/29/13	515
517	PROD Domain - Code Install	1 wk	Tue 7/23/13	Mon 7/29/13	515
518	PROD Domain - Quarterly Clinical Bioninformatics Ontology	1 wk	Mon 7/15/13	Fri 7/19/13	8
519	**Migration Tasks**	**1 wk**	**Mon 5/20/13**	**Fri 5/24/13**	
520	Monitor progress of Classic Migration PSID Evaluation	1 wk	Mon 5/20/13	Fri 5/24/13	
521	**BedRock**	**1 wk**	**Mon 5/20/13**	**Fri 5/24/13**	
522	Create Client Bedrock-only Sign-ons for TEMP / Hotel domain	1 wk	Mon 5/20/13	Fri 5/24/13	
523	Discuss Database Transfer Process to Client Hardware w/ CWx PM & TEL	1 wk	Mon 5/20/13	Fri 5/24/13	
524	Contact s Utilizing Bedrock & Have Them Validate the Data in the New Client PROD Domain	1 wk	Mon 5/20/13	Fri 5/24/13	
525	**DESIGN REVIEW**	**23 wks**	**Mon 7/15/13**	**Fri 12/20/13**	**8**
526	Schedule technical support for Design Review Event	1 wk	Mon 7/15/13	Fri 7/19/13	
527	**Task 2: Document Solution Architecture**	**1 wk**	**Mon 7/15/13**	**Fri 7/19/13**	
528	Subtask 2.1 Document Solution Architecture	1 wk	Mon 7/15/13	Fri 7/19/13	
529	**Task 3: Document System Architecture**	**5 wks**	**Mon 7/15/13**	**Fri 8/16/13**	
530	Review Migration - V5U History Upload Specifications Document	5 wks	Mon 7/15/13	Fri 8/16/13	
531	Subtask 3.1 Document System Architecture	1 wk	Mon 7/15/13	Fri 7/19/13	
532	**Task 4 Document Technical Architecture**	**1 wk**	**Mon 7/15/13**	**Fri 7/19/13**	
533	Subtask 4.1 Document Technical Architecture	1 wk	Mon 7/15/13	Fri 7/19/13	

ID	Task Name	Duration	Start	Finish	Predecessors
534	**Perform Application Software Setup**	**23 wks**	**Mon 7/15/13**	**Fri 12/20/13**	
535	Install/Configure CAMM Server SW	1 wk	Mon 7/15/13	Fri 7/19/13	
536	Contact iAware Solution Architect to determine when to expect pre-installation build to be complete	1 wk	Mon 10/7/13	Fri 10/11/13	9
537	Schedule CernerWorks/Client iAware WebSphere installation	10 days	Mon 7/15/13	Fri 7/26/13	
538	Migration - MRN Group and Alias Pool Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
539	Data Collection Workbook - Clinical Reporting XR Installation Configuration	11 wks	Mon 10/7/13	Fri 12/20/13	9
540	**Task 5: Initiate and Perform Hosting Services**	**124 wks**	**Mon 2/25/13**	**Fri 7/10/15**	
541	Subtask 5.1 Develop Remote Hosting Services Plan	1 mon	Mon 2/25/13	Fri 3/22/13	486
542	Subtask 5.2 Initiate and Perform Remote Hosting Services for Design, Build, Test Deployment and Training	30 mons	Mon 3/25/13	Fri 7/10/15	541
543	**SYSTEM VALIDATION SESSION**	**13 wks**	**Mon 10/7/13**	**Fri 1/3/14**	**9**
544	Conduct System Management Workshop	5 days	Mon 10/7/13	Fri 10/11/13	
545	Technical System Validation Session Call	1 wk	Mon 10/7/13	Fri 10/11/13	
546	Configure Modality Targets (Modalities)	5 days	Mon 10/7/13	Fri 10/11/13	
547	**ProVision Servers & Storage**	**5.6 wks**	**Mon 10/7/13**	**Wed 11/13/13**	
548	Master Archive Servers - High Availability (Store - DB) Primary Data Centers	8 days	Mon 10/7/13	Wed 10/16/13	
549	Test Archive Server (1) Primary Data Center (Site 9)	1 wk	Thu 10/17/13	Wed 10/23/13	548
550	Modality Worklist Server1 (MWL)	1 wk	Thu 10/24/13	Wed 10/30/13	549
551	TSM Back-up Server with Tape Library	1 wk	Thu 10/31/13	Wed 11/6/13	550
552	Storage - Primary Center (connect Store-DB servers)	1 wk	Thu 11/7/13	Wed 11/13/13	551
553	**ProVision Workstations**	**3.4 wks**	**Thu 11/14/13**	**Fri 12/6/13**	
554	Technical Installation - Network- Direct Access- Initial DICOM data transfer	12 days	Thu 11/14/13	Fri 11/29/13	552
555	Trainer and Conversion Prep ProVision PACS System ReviewA.doc (system readiness assessment)	1 wk	Mon 12/2/13	Fri 12/6/13	554
556	Finalize plan is in place for hardware installation and configuration including printers, WTS locations, scanners, MDI's, etc.	3 wks	Mon 12/16/13	Fri 1/3/14	11
557	Finalize plan for sample hardware including printers, WTS locations, scanners, MDI's, etc.to be available at IT 1	3 wks	Mon 12/16/13	Fri 1/3/14	11
558	Train Domain Replication	1 wk	Mon 12/16/13	Fri 12/20/13	11
559	Train Domain - Service Sentry	1 wk	Mon 12/23/13	Fri 12/27/13	558
560	Peripheral Workshop	1 wk	Mon 12/16/13	Fri 12/20/13	11
561	Schedule History Upload controlled tests - see notes	2 wks	Mon 12/16/13	Fri 12/27/13	11

ID	Task Name	Duration	Start	Finish	Predecessors
562	**TRAINER AND CONVERSION PREP**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	**11**
563	Assess Technical Conversion Readiness	1 wk	Mon 12/16/13	Fri 12/20/13	
564	Prepare to Lead the Technical Planning Session during TCP	1 wk	Mon 12/16/13	Fri 12/20/13	
565	PROD Domain - Code Install	1 wk	Mon 12/16/13	Fri 12/20/13	
566	BUILD Domain - Code Install	1 wk	Mon 12/16/13	Fri 12/20/13	
567	Train Domain Replication	1 wk	Mon 2/17/14	Fri 2/21/14	12
568	**MAINTENANCE TRAINING**	**5 wks**	**Mon 2/17/14**	**Fri 3/21/14**	**12**
569	Non-Prod HW/SW Install	1 wk	Mon 2/17/14	Fri 2/21/14	
570	Prepare for Client Domain Access	1 wk	Mon 2/17/14	Fri 2/21/14	
571	Prod HW/SW Install	1 wk	Mon 3/17/14	Fri 3/21/14	13
572	**INTEGRATION TESTING 1**	**8 wks**	**Mon 3/17/14**	**Fri 5/9/14**	**13**
573	Train Domain Replicate Request and Code Install	1 wk	Mon 3/17/14	Fri 3/21/14	
574	MOCK Domain Replication Request	1 wk	Mon 3/17/14	Fri 3/21/14	
575	Testing of Technology/Hardware	1 wk	Mon 3/17/14	Fri 3/21/14	
576	Ensure RDDS team is aware of testing event. Define when RDDS will be turned off from PROD to BUILD and final cutover of data.	2 wks	Mon 3/17/14	Fri 3/28/14	
577	**Configure RDDS**	**2 wks**	**Mon 3/17/14**	**Fri 3/28/14**	
578	RDDS Open Event	0.5 days	Mon 3/17/14	Mon 3/17/14	
579	RDDS Merge/Cutover	4.5 days	Mon 3/17/14	Fri 3/21/14	578
580	RDDS Audit/Issue resolution	4.5 days	Mon 3/24/14	Fri 3/28/14	579
581	RDDS Close Event	0.5 days	Fri 3/28/14	Fri 3/28/14	580
582	RDDS Open Event	0.5 days	Mon 3/17/14	Mon 3/17/14	
583	RDDS Merge/Cutover	4.5 days	Mon 3/17/14	Fri 3/21/14	582
584	RDDS Audit/Issue resolution	4.5 days	Mon 3/24/14	Fri 3/28/14	583
585	RDDS Close Event	0.5 days	Fri 3/28/14	Fri 3/28/14	584
586	Complete data moves from BUILD to PROD as a result of database changes from IT1.	3 wks	Mon 4/21/14	Fri 5/9/14	14
587	MOCK Domain Replication	1 wk	Mon 4/21/14	Fri 4/25/14	14
588	Work with teams to make build passive (if applicable)	3 wks	Mon 4/21/14	Fri 5/9/14	14
589	**Configure RDDS**	**2.2 wks**	**Mon 4/7/14**	**Mon 4/21/14**	
590	RDDS Open Event	0.5 days	Mon 4/7/14	Mon 4/7/14	587SS-2 wks
591	RDDS Move Build changes to prod Temp Tables	4.5 days	Mon 4/7/14	Fri 4/11/14	590
592	RDDS Audit/Issue resolution	4.5 days	Mon 4/14/14	Fri 4/18/14	591

ID	Task Name	Duration	Start	Finish	Predecessors
593	RDDS Initial set up of Mock - see note	0.5 days	Fri 4/18/14	Fri 4/18/14	592
594	RDDS Cutover into Mock	1 day	Mon 4/21/14	Mon 4/21/14	593
595	RDDS Validation meetings with teams.	5 days	Mon 4/14/14	Fri 4/18/14	591
596	RDDS Merge/Cutover Build to Mock	5 days	Mon 4/14/14	Fri 4/18/14	591
597	**INTEGRATION TESTING 2**	**13 wks**	**Mon 4/21/14**	**Fri 7/18/14**	**14**
598	Schedule Volume Test, High Availability Test with Client	1 wk	Mon 4/21/14	Fri 4/25/14	
599	Test Technology	1 wk	Mon 4/21/14	Fri 4/25/14	
600	Continue to run RDDS from BUILD to PROD after IT2 for any new changes.	6 wks	Mon 6/9/14	Fri 7/18/14	16
601	Checkpoint: Database and Code Freeze	1 wk	Mon 6/9/14	Fri 6/13/14	16
602	**Configure RDDS**	**2 wks**	**Mon 6/9/14**	**Fri 6/20/14**	**16**
603	Finalize RDDS cutover plan with IT2 changes not moved to PROD.	2 wks	Mon 6/9/14	Fri 6/20/14	16
604	RDDS Final Move Build changes to prod Temp Tables	5 days	Mon 6/9/14	Fri 6/13/14	
605	RDDS Audit/Issue re	4.5 days	Mon 6/16/14	Fri 6/20/14	604
606	**CONVERSION**	**3 wks**	**Mon 6/9/14**	**Fri 6/27/14**	**16**
607	Begin History Uploads	1 wk	Mon 6/9/14	Fri 6/13/14	
608	CERT Domain Replication Request	1 wk	Mon 6/9/14	Fri 6/13/14	
609	CERT Domain Replication	1 wk	Mon 6/9/14	Fri 6/13/14	
610	CERT Domain - Service Sentry	1 wk	Mon 6/16/14	Fri 6/20/14	609
611	Technical Conversion Readiness Assessment	1 wk	Mon 6/9/14	Fri 6/13/14	
612	Volume Test with End Users - Simulate production load	1 wk	Mon 6/9/14	Fri 6/13/14	
613	High Availability Test with Client	2 wks	Mon 6/9/14	Fri 6/20/14	
614	Checkpoint: Database and Code Freeze	1 wk	Mon 6/9/14	Fri 6/13/14	
615	Activity Data Delete and System Reboot	1 wk	Mon 6/9/14	Fri 6/13/14	
616	Turn-over (30 days Complete Post go live)	3 wks	Mon 6/9/14	Fri 6/27/14	
617	CONVERSION - Rollout1 Ambulatory	1 wk	Mon 6/9/14	Fri 6/13/14	16
618	**POST CONVERSION REVIEW**	**3 wks**	**Mon 9/15/14**	**Fri 10/3/14**	**24**
619	System Adoption	1 wk	Mon 9/15/14	Fri 9/19/14	
620	System Health Check	3 wks	Mon 9/15/14	Fri 10/3/14	
621	Infrastructure	3 wks	Mon 9/15/14	Fri 10/3/14	
622	Complete Design	0 days	Fri 11/29/13	Fri 11/29/13	9FS+2 mons
623	Complete Build	0 days	Fri 4/11/14	Fri 4/11/14	14SS-1 day
624	Complete Test	0 days	Fri 6/6/14	Fri 6/6/14	16
625	**SOW #18 - Data Conversion**	**60 wks**	**Mon 12/24/12**	**Fri 2/14/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
626	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
627	Subtask 1.1 Develop detailed Sub-Project Work Plan - Data Conversion	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
628	Subtask 1.2 Conduct Initiation session for Data Conversion Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
629	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
630	**Task 2 Conduct Current State Assessment**	**5 wks**	**Mon 5/20/13**	**Fri 6/21/13**	
631	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
632	Subtask 2.2 Conduct Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
633	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/17/13	Fri 6/21/13	632FS+3 wks
634	**Task 3 Conduct System Review**	**21 wks**	**Mon 7/8/13**	**Fri 11/29/13**	
635	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/8/13	Fri 7/12/13	8SS
636	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	5 mons	Mon 7/15/13	Fri 11/29/13	635
637	**Task 4 Conduct Design Review**	**9 wks**	**Mon 9/30/13**	**Fri 11/29/13**	
638	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
639	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/28/13	Fri 11/1/13	638FS+3 wks
640	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/28/13	Fri 11/1/13	638FS+3 wks
641	Subtask 4.4 Conduct Data Conversion Workflow Workshop	1 wk	Mon 10/28/13	Fri 11/1/13	638FS+3 wks
642	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/25/13	Fri 11/29/13	641FS+3 wks
643	**Task 5 Complete Partial System Build**	**21 wks**	**Mon 7/15/13**	**Fri 12/6/13**	
644	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	1 wk	Mon 7/15/13	Fri 7/19/13	8
645	Subtask 5.2 Complete Initial Partial Build	5 mons	Mon 7/22/13	Fri 12/6/13	644
646	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/9/13**	**Fri 1/10/14**	
647	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/9/13	Fri 12/13/13	11SS
648	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/16/13	Fri 1/10/14	647
649	**Task 7 Complete Build of Data Conversion and Conduct Unit and System Testing**	**10 wks**	**Fri 12/6/13**	**Fri 2/14/14**	
650	Subtask 7.1 Complete System Build	0 days	Fri 12/6/13	Fri 12/6/13	645
651	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/9/13	Fri 2/14/14	650
652	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/14/14	Fri 2/14/14	651
653	**SOW #19 - Security**	**61 wks**	**Mon 12/24/12**	**Fri 2/21/14**	
654	**Task 1 Conduct SOW Kick-off**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	

ID	Task Name	Duration	Start	Finish	Predecessors
655	Subtask 1.1 Develop Sub-Project Work Plan for Security	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
656	Subtask 1.2 Initiation Session for Security Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
657	**Task 2 Document Security Objectives and Protection Requirements**	**16 wks**	**Mon 7/15/13**	**Fri 11/1/13**	
658	Subtask 2.1 Document Security Objectives and Protection Requirements	2 mons	Mon 7/15/13	Fri 9/6/13	656FS+2 mons
659	Subtask 2.2 Develop System Security Plan	2 mons	Mon 9/9/13	Fri 11/1/13	658
660	**Task 3 Implement Security Monitoring and Auditing Infrastructure and Processes**	**12 wks**	**Mon 11/4/13**	**Fri 1/24/14**	
661	Subtask 3.1 Set Up and Configure Security Monitoring and Auditing Infrastructure and Processes	3 mons	Mon 11/4/13	Fri 1/24/14	659
662	Subtask 3.2 Deploy Security Monitoring and Auditing Tools	3 mons	Mon 11/4/13	Fri 1/24/14	659
663	**Task 4 Implement Roles and Provision Users**	**16 wks**	**Mon 11/4/13**	**Fri 2/21/14**	
664	Subtask 4.1 Document User Security Profiles (Roles and Authorizations)	2 mons	Mon 11/4/13	Fri 12/27/13	659
665	Subtask 4.2 Implement User Roles and Authorizations	1 mon	Mon 12/30/13	Fri 1/24/14	664
666	Subtask 4.3 Populate User Roles and Authorizations	1 mon	Mon 1/27/14	Fri 2/21/14	665
667	**FOUNDATIONS**	**94.2 wks**	**Fri 12/21/12**	**Fri 10/10/14**	
668	**SOW #4 - Registration and EMPI (Core/ EMPI / Message Center)**	**94.2 wks**	**Fri 12/21/12**	**Fri 10/10/14**	
669	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/31/12**	**Fri 5/24/13**	
670	Subtask 1.1 Develop detailed Sub-Project Work Plan - Registration and EMPI	1 mon	Mon 12/31/12	Fri 1/25/13	104SS-5 mons
671	Subtask 1.2 Conduct Initiation session for Registration and EMPI Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
672	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
673	**DESIGN**	**60 wks**	**Mon 4/22/13**	**Fri 6/13/14**	
674	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**7 wks**	**Mon 4/22/13**	**Fri 6/7/13**	
675	**Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment**	**1 wk**	**Mon 5/27/13**	**Fri 5/31/13**	
676	Audit of Current Patient Care Locations	1 wk	Mon 5/27/13	Fri 5/31/13	7SS+2 wks
677	**Subtask 2.2 Conduct Workflow Assessment**	**2 wks**	**Mon 5/27/13**	**Fri 6/7/13**	
678	Onsite Workflow Assessment - Core	1 wk	Mon 5/27/13	Fri 5/31/13	7SS+2 wks
679	Onsite Workflow Assessment - PowerChart	1 wk	Mon 5/27/13	Fri 5/31/13	7SS+2 wks
680	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	2 wks	Mon 5/27/13	Fri 6/7/13	7SS+2 wks
681	Complete Message Center WBT	1 day	Mon 4/22/13	Mon 4/22/13	5SS
682	Complete PowerChart WBT	4 wks	Mon 4/22/13	Fri 5/17/13	5SS

ID	Task Name	Duration	Start	Finish	Predecessors
683	**Task 3 Conduct System Review**	**1 wk**	**Mon 7/15/13**	**Fri 7/19/13**	
684	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	110SS
685	**Subtask 3.2 Perform System Review Data Collection (System Review follow-up) (Data Collection)**	**56 wks**	**Mon 5/20/13**	**Fri 6/13/14**	
686	Data Collection Workbook - Core Systems Insurance	8 wks	Mon 7/15/13	Fri 9/6/13	8
687	Data Collection Workbook - Bedrock Core Systems Organization Design Homework	8 wks	Mon 5/20/13	Fri 7/12/13	7
688	Data Collection Workbook - Core Systems Location Aliases	8 wks	Mon 7/15/13	Fri 9/6/13	8
689	Data Collection Workbook - Core Systems Security/PowerChart Security tab	8 wks	Mon 10/7/13	Fri 11/29/13	9
690	Data Collection Workbook - Core Systems Privileges Security tab	8 wks	Mon 10/7/13	Fri 11/29/13	9
691	Data Collection Workbook - Core Systems Physician and Provider Group	8 wks	Mon 7/15/13	Fri 9/6/13	8
692	Data Collection Workbook - Core Encounter Class Type Linking and Auto Discharge	8 wks	Mon 7/15/13	Fri 9/6/13	8
693	Data Collection Workbook - Core Systems Security> Message Center tab	8 wks	Mon 10/7/13	Fri 11/29/13	9
694	Data Collection Workbook - Core Systems Clinical Document	8 wks	Mon 7/15/13	Fri 9/6/13	8
695	Data Collection Workbook - Core Systems Foreign Laboratory and Radiology	8 wks	Mon 7/15/13	Fri 9/6/13	8
696	Data Collection Workbook - Core Systems Non-Facility Organizations	8 wks	Mon 7/15/13	Fri 9/6/13	8
697	Data Collection Workbook - Core Systems Security	8 wks	Mon 10/7/13	Fri 11/29/13	9
698	Data Collection Workbook - Enterprise Master Person Index (EMPI) Search Screen	8 wks	Mon 7/15/13	Fri 9/6/13	8
699	Data Collection Workbook - Core Systems Positions	8 wks	Mon 7/15/13	Fri 9/6/13	8
700	Data Collection Workbook - Core Systems Physician and Provider Group > New tab for users	8 wks	Mon 4/21/14	Fri 6/13/14	14
701	Data Collection Workbook - Core Systems Phase X Personnel Collection	8 wks	Mon 4/21/14	Fri 6/13/14	14
702	Data Collection Workbook - Message Center > Category and Folder Items	8 wks	Mon 7/15/13	Fri 9/6/13	8
703	Data Collection Workbook - Message Center > Columns	8 wks	Mon 7/15/13	Fri 9/6/13	8
704	Data Collection Workbook - Message Center > Pools	8 wks	Mon 7/15/13	Fri 9/6/13	8
705	Data Collection Workbook - Message Center > Result FYI Subscriptions	8 wks	Mon 7/15/13	Fri 9/6/13	8
706	Data Collection Workbook - Message Center > Message Templates	8 wks	Mon 7/15/13	Fri 9/6/13	8
707	Data Collection Workbook - Message Center > LetterTemplates	8 wks	Mon 7/15/13	Fri 9/6/13	8
708	**Task 4 Conduct Design Review**	**9 wks**	**Mon 10/7/13**	**Fri 12/6/13**	

ID	Task Name	Duration	Start	Finish	Predecessors
709	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	124SS
710	Subtask 4.2 Conduct Design Review Session follow-up	2 mons	Mon 10/14/13	Fri 12/6/13	709
711	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/14/13	Fri 10/18/13	709
712	Subtask 4.4 Conduct Registration and EMPI Workflow Workshop	1 wk	Mon 10/14/13	Fri 10/18/13	709
713	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/11/13	Fri 11/15/13	709FS+1 mon
714	**Task 5 Complete Partial System Build (BUILD)**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
715	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	717SS
716	Work Package: Core Systems - Insurance, Health Plans, Employers	14 wks	Mon 9/9/13	Fri 12/13/13	686
717	Work Package: Core Systems - Locations	14 wks	Mon 7/15/13	Fri 10/18/13	8
718	Work Package: Core Systems - Organizations	14 wks	Mon 7/15/13	Fri 10/18/13	687
719	Work Package: Core Systems - Location Alias	14 wks	Mon 9/9/13	Fri 12/13/13	688
720	Work Package: Core Systems - Powerchart Security	14 wks	Mon 12/2/13	Fri 3/7/14	689
721	Work Package: Core Systems - Privileges	14 wks	Mon 12/2/13	Fri 3/7/14	690
722	Work Package: Core Systems - Physician and Provider Group	14 wks	Mon 9/9/13	Fri 12/13/13	691
723	Work Package: Core Systems - Encounter Type Linking	14 wks	Mon 9/9/13	Fri 12/13/13	692
724	Work Package: Core Systems - Auto Discharge	14 wks	Mon 9/9/13	Fri 12/13/13	692
725	Work Package: Core Systems - Clinical Documents Section of Event Set Hierarchy	14 wks	Mon 9/9/13	Fri 12/13/13	694
726	Work Package: Core Systems - Laboratory and Radiology ESH Sections and Aliases	14 wks	Mon 9/9/13	Fri 12/13/13	695
727	Work Package: Core Systems - Non-facility Organizations	14 wks	Mon 9/9/13	Fri 12/13/13	696
728	Work Package: Core Systems - Client Organizations	14 wks	Mon 9/9/13	Fri 12/13/13	696
729	Work Package: Core Systems - Demographic Banner	14 wks	Mon 12/2/13	Fri 3/7/14	697
730	Work Package: Core Systems - Search Screens	14 wks	Mon 9/9/13	Fri 12/13/13	698
731	Work Package: Core Systems - Project Start Up Tasks	14 wks	Fri 12/21/12	Thu 3/28/13	
732	Work Package: Core Systems - Core Security	14 wks	Mon 9/9/13	Fri 12/13/13	699
733	Work Package: Core Systems - Alias Pools	14 wks	Mon 7/15/13	Fri 10/18/13	8
734	Work Package: Core Systems - Build All Users	14 wks	Mon 6/16/14	Fri 9/19/14	700,701
735	Work Package: Core Systems - Meaningful Use	14 wks	Mon 7/15/13	Fri 10/18/13	8
736	Work Package: EMPI - Netrics Servers	14 wks	Mon 7/15/13	Fri 10/18/13	8
737	Work Package: EMPI - Settings	14 wks	Mon 7/15/13	Fri 10/18/13	8
738	Work Package: EMPI - Reports	14 wks	Mon 7/15/13	Fri 10/18/13	8
739	Work Package: EMPI - Batch match	14 wks	Mon 7/15/13	Fri 10/18/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
740	Work Package: EMPI - Post Reg Reconciliation	14 wks	Mon 7/15/13	Fri 10/18/13	8
741	Work Package: Core Systems - Message Center Configurations	14 wks	Mon 12/2/13	Fri 3/7/14	693,702,703
742	Work Package: Core Systems - Message Center Pools	14 wks	Mon 9/9/13	Fri 12/13/13	704
743	Work Package: Core Systems - Message Center FYI Subscriptions	14 wks	Mon 9/9/13	Fri 12/13/13	705
744	Work Package: Core Systems - Message Center Templates	14 wks	Mon 9/9/13	Fri 12/13/13	706,707
745	Subtask 5.2 Complete Initial Partial Build	1 wk	Mon 3/10/14	Fri 3/14/14	741
746	**Task 6 Conduct System Validation**	**17 wks**	**Mon 10/7/13**	**Fri 1/31/14**	
747	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 10/7/13	Fri 10/11/13	132SS
748	Subtask 6.2 Conduct System Validation Session Follow-up	4 mons	Mon 10/14/13	Fri 1/31/14	747
749	**Task 7 Complete Build of Registration and EMPI and Conduct Unit and System Testing (TEST)**	**52 wks**	**Mon 10/14/13**	**Fri 10/10/14**	
750	Subtask 7.1 Complete System Build	0.2 wks	Mon 10/14/13	Mon 10/14/13	751SS-1 wk
751	**Quality Center Testing**	**23 wks**	**Mon 10/21/13**	**Fri 3/28/14**	
752	QC Test: Core Systems - Insurance, Health Plans, Employers	3 wks	Mon 12/16/13	Fri 1/3/14	716
753	QC Test: Core Systems - Locations	15 days	Mon 10/21/13	Fri 11/8/13	717
754	QC Test: Core Systems - Organizations	15 days	Mon 10/21/13	Fri 11/8/13	718
755	QC Test: Core Systems - Location Alias	15 days	Mon 12/16/13	Fri 1/3/14	719
756	QC Test: Core Systems - Powerchart Security	15 days	Mon 3/10/14	Fri 3/28/14	720
757	QC Test: Core Systems - Privileges	15 days	Mon 3/10/14	Fri 3/28/14	721
758	QC Test: Core Systems - Physician and Provider Group	15 days	Mon 12/16/13	Fri 1/3/14	722
759	QC Test: Core Systems - Encounter Type Linking	15 days	Mon 12/16/13	Fri 1/3/14	723
760	QC Test: Core Systems - Auto Discharge	15 days	Mon 12/16/13	Fri 1/3/14	724
761	QC Test: Core Systems - Clinical Documents Section of Event Set Hierarchy	15 days	Mon 12/16/13	Fri 1/3/14	725
762	QC Test: Core Systems - Laboratory and Radiology ESH Sections and Aliases	15 days	Mon 12/16/13	Fri 1/3/14	726
763	QC Test: Core Systems - Non-facility Organizations	15 days	Mon 12/16/13	Fri 1/3/14	727
764	QC Test: Core Systems - Client Organizations	15 days	Mon 12/16/13	Fri 1/3/14	728
765	QC Test: Core Systems - Demographic Banner	15 days	Mon 3/10/14	Fri 3/28/14	729
766	QC Test: Core Systems - Search Screens	15 days	Mon 12/16/13	Fri 1/3/14	730
767	QC Test: Core Systems - Message Center Configurations	15 days	Mon 3/10/14	Fri 3/28/14	741
768	QC Test: Core Systems - Message Center Pools	15 days	Mon 12/16/13	Fri 1/3/14	742
769	QC Test: Core Systems - Message Center FYI Subscriptions	15 days	Mon 12/16/13	Fri 1/3/14	743
770	QC Test: Core Systems - Message Center Templates	15 days	Mon 12/16/13	Fri 1/3/14	744

ID	Task Name	Duration	Start	Finish	Predecessors
771	**Unit Testing**	**43 wks**	**Mon 12/16/13**	**Fri 10/10/14**	
772	Localize Unit Test Scripts - Core	5 wks	Mon 12/16/13	Fri 1/17/14	11
773	Localize Unit Test Scripts - EMPI	5 wks	Mon 12/16/13	Fri 1/17/14	11
774	Localize Unit Test Scripts - Message Center	5 wks	Mon 12/16/13	Fri 1/17/14	11
775	Unit Test Scripts - Core	3 wks	Mon 1/20/14	Fri 2/7/14	772
776	Unit Test Scripts - EMPI	3 wks	Mon 1/20/14	Fri 2/7/14	773
777	Unit Test Scripts - Message Center	3 wks	Mon 1/20/14	Fri 2/7/14	774
778	Unit Test: Core Systems - Insurance, Health Plans, Employers	3 wks	Mon 2/10/14	Fri 2/28/14	716,775,752
779	Unit Test: Core Systems - Locations	3 wks	Mon 2/10/14	Fri 2/28/14	717,775,753
780	Unit Test: Core Systems - Organizations	3 wks	Mon 2/10/14	Fri 2/28/14	718,775,754
781	Unit Test: Core Systems - Location Alias	3 wks	Mon 2/10/14	Fri 2/28/14	719,775,755
782	Unit Test: Core Systems - Powerchart Security	3 wks	Mon 3/31/14	Fri 4/18/14	720,775,756
783	Unit Test: Core Systems - Privileges	3 wks	Mon 3/31/14	Fri 4/18/14	721,775,757
784	Unit Test: Core Systems - Physician and Provider Group	3 wks	Mon 2/10/14	Fri 2/28/14	722,775,758
785	Unit Test: Core Systems - Encounter Type Linking	3 wks	Mon 2/10/14	Fri 2/28/14	723,775,759
786	Unit Test: Core Systems - Auto Discharge	3 wks	Mon 2/10/14	Fri 2/28/14	724,775,760
787	Unit Test: Core Systems - Clinical Documents Section of Event Set Hierarchy	3 wks	Mon 2/10/14	Fri 2/28/14	725,775,761
788	Unit Test: Core Systems - Laboratory and Radiology ESH Sections and Aliases	3 wks	Mon 2/10/14	Fri 2/28/14	726,775,762
789	Unit Test: Core Systems - Non-facility Organizations	3 wks	Mon 2/10/14	Fri 2/28/14	727,775,763
790	Unit Test: Core Systems - Client Organizations	3 wks	Mon 2/10/14	Fri 2/28/14	728,775,764
791	Unit Test: Core Systems - Demographic Banner	3 wks	Mon 3/31/14	Fri 4/18/14	729,775,765
792	Unit Test: Core Systems - Search Screens	3 wks	Mon 2/10/14	Fri 2/28/14	730,775,766
793	Unit Test: Core Systems - Project Start Up Tasks	3 wks	Mon 2/10/14	Fri 2/28/14	731,775
794	Unit Test: Core Systems - Core Security	3 wks	Mon 2/10/14	Fri 2/28/14	732,775
795	Unit Test: Core Systems - Alias Pools	3 wks	Mon 2/10/14	Fri 2/28/14	733,775
796	Unit Test: Core Systems - Build All Users	3 wks	Mon 9/22/14	Fri 10/10/14	734,775
797	Unit Test: Core Systems - Meaningful Use	3 wks	Mon 2/10/14	Fri 2/28/14	735,775
798	Unit Test: EMPI - Netrics Servers	3 wks	Mon 2/10/14	Fri 2/28/14	736,776
799	Unit Test: EMPI - Settings	3 wks	Mon 2/10/14	Fri 2/28/14	737,776
800	Unit Test: EMPI - Reports	3 wks	Mon 2/10/14	Fri 2/28/14	738,776
801	Unit Test: EMPI - Batch match	3 wks	Mon 2/10/14	Fri 2/28/14	739,776

ID	Task Name	Duration	Start	Finish	Predecessors
802	Unit Test: EMPI - Post Reg Reconciliation	3 wks	Mon 2/10/14	Fri 2/28/14	740,776
803	Unit Test: Core Systems - Message Center Configurations	3 wks	Mon 3/31/14	Fri 4/18/14	741,777,767
804	Unit Test: Core Systems - Message Center Pools	3 wks	Mon 2/10/14	Fri 2/28/14	742,777,768
805	Unit Test: Core Systems - Message Center FYI Subscriptions	3 wks	Mon 2/10/14	Fri 2/28/14	743,777,769
806	Unit Test: Core Systems - Message Center Templates	3 wks	Mon 2/10/14	Fri 2/28/14	744,777,770
807	**System Testing**	**29 wks**	**Mon 12/16/13**	**Fri 7/4/14**	
808	Localize System Test Tracking and Scripts - Core	1 wk	Mon 12/16/13	Fri 12/20/13	11
809	Localize System Test Tracking and Scripts - EMPI	1 wk	Mon 12/16/13	Fri 12/20/13	11
810	Localize System Test Tracking and Scripts - Message Center	1 wk	Mon 12/16/13	Fri 12/20/13	11
811	First Draft System Test Scripts - Core	2 wks	Mon 12/23/13	Fri 1/3/14	808
812	First Draft System Test Scripts - EMPI	2 wks	Mon 12/23/13	Fri 1/3/14	809
813	First Draft System Test Scripts - Message Center	2 wks	Mon 12/23/13	Fri 1/3/14	810
814	Final System Test Scripts - Core	2 wks	Mon 12/23/13	Fri 1/3/14	808
815	Final System Test Scripts - EMPI	2 wks	Mon 12/23/13	Fri 1/3/14	809
816	Final System Test Scripts - Message Center	2 wks	Mon 12/23/13	Fri 1/3/14	810
817	Complete System Testing - Core	3 wks	Mon 6/16/14	Fri 7/4/14	814,716SS,717SS,718S
818	Complete System Testing - EMPI	3 wks	Mon 1/6/14	Fri 1/24/14	815,736SS,737SS,738S
819	Complete System Testing - Message Center	3 wks	Mon 1/6/14	Fri 1/24/14	816,741SS,742SS,743S
820	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
821	Integration Test Scripts - Core	5 wks	Mon 12/16/13	Fri 1/17/14	11
822	Integration Test Scripts - EMPI	5 wks	Mon 12/16/13	Fri 1/17/14	11
823	Integration Test Scripts - Message Center	5 wks	Mon 12/16/13	Fri 1/17/14	11
824	Complete Integration Testing - Core	5 wks	Mon 1/20/14	Fri 2/21/14	821
825	Complete Integration Testing - EMPI	5 wks	Mon 1/20/14	Fri 2/21/14	822
826	Complete Integration Testing - Message Center	5 wks	Mon 1/20/14	Fri 2/21/14	823
827	Milestone: Conclude All Testing - Core	0 days	Fri 10/10/14	Fri 10/10/14	788,789,790,791,792,7
828	Milestone: Conclude All Testing - EMPI	0 days	Fri 2/28/14	Fri 2/28/14	798,799,800,801,802,8
829	Milestone: Conclude All Testing - Message Center	0 days	Fri 4/18/14	Fri 4/18/14	803,804,805,806,819,8
830	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	10 wks	Mon 10/21/13	Fri 12/27/13	751SS
831	Subtask 7.3 Complete Unit and System Testing	1 day	Mon 4/21/14	Mon 4/21/14	829
832	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
833	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
834	Conversion Readiness Assessment - Core	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
835	Conversion Readiness Assessment - Message Center	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
836	Review & Update Conversion Cutover Plan (sent by IA) - Core	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
837	Review & Update Conversion Cutover Plan (sent by IA) - Message Center	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
838	Complete the Turnover Process documentation- Core	5 wks	Mon 6/30/14	Fri 8/1/14	18
839	Complete the Turnover Process documentation- Message Center	5 wks	Mon 6/30/14	Fri 8/1/14	18
840	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
841	Complete Post Conversion Assessment Workbook for Core	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
842	Complete Post Conversion Assessment Workbook for Message Center	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
843	**SOW #5 - Charge Services (Charge Services)**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
844	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/31/12**	**Fri 5/24/13**	
845	Subtask 1.1 Develop detailed Sub-Project Work Plan - Charge Services	1 mon	Mon 12/31/12	Fri 1/25/13	104SS-5 mons
846	Subtask 1.2 Conduct Initiation session for Charge Services Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
847	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	104SS
848	**DESIGN**	**56 wks**	**Mon 12/31/12**	**Fri 1/24/14**	
849	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
850	Conduct Open House Demo Session - Charge Services	1 wk	Mon 4/29/13	Fri 5/3/13	5
851	Complete Charge Services WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
852	Complete Open House Scripts - Charge Services	4 wks	Fri 4/26/13	Fri 5/24/13	5
853	**Task 2 Conduct Current State Assessment**	**1 wk**	**Mon 5/20/13**	**Fri 5/24/13**	
854	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
855	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - Charge Services)	1 wk	Mon 5/20/13	Fri 5/24/13	7
856	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 5/20/13	Fri 5/24/13	7
857	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/8/13**	**Fri 11/1/13**	
858	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/8/13	Fri 7/12/13	8SS
859	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/15/13	Fri 11/1/13	858
860	**Task 4 Conduct Design Review**	**17 wks**	**Mon 9/30/13**	**Fri 1/24/14**	
861	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
862	Subtask 4.2 Conduct Design Review Session follow-up	4 mons	Mon 10/7/13	Fri 1/24/14	861
863	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/14/13	Fri 10/18/13	9FS+1 wk

ID	Task Name	Duration	Start	Finish	Predecessors
864	Subtask 4.4 Conduct Charge Services Workflow Workshop	1 wk	Mon 10/14/13	Fri 10/18/13	9FS+1 wk
865	Subtask 4.5 Develop Final Detailed Design Document	2 wks	Mon 10/28/13	Fri 11/8/13	864FS+1 wk
866	**Data Collection**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
867	Data Collection Workbook - Revenue Cycle Reporting (Current State section)	4 wks	Mon 12/31/12	Fri 1/25/13	2
868	Data Collection Workbook - Revenue Cycle Reporting (Future State and Custom Report sections. Client Signoff on each row)	4 wks	Mon 10/7/13	Fri 11/1/13	867,9
869	Data Collection Workbook- RadNet > Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
870	Data Collection Workbook - PathNet Common: Charging - AP Billing Tasks	8 wks	Mon 7/15/13	Fri 9/6/13	8
871	Data Collection Workbook - PathNet Common: Charging - BBT Procedures, Charging - BBT Products	8 wks	Mon 7/15/13	Fri 9/6/13	8
872	Data Collection Workbook - PathNet Common: Charging - Micro Orderables, Charging - Micro Reports, Charging - Micro Panels, Charging - Micro Biochemicals, Charging - Micro Biochem Group,	8 wks	Mon 7/15/13	Fri 9/6/13	8
873	Data Collection Workbook - PathNet Common: Charging - GL	8 wks	Mon 7/15/13	Fri 9/6/13	8
874	Data Collection Workbook - Acute Care PowerOrders Care Doc Order Management Workbook: All tabs with orders design	8 wks	Mon 7/15/13	Fri 9/6/13	8
875	CareNet Therapies Alpha Billing and Workload Data Collection	8 wks	Mon 7/15/13	Fri 9/6/13	8
876	Data Collections Woorkbook - FirstNet Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
877	Data Collections Woorkbook - PharmNet Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
878	Data Collections Woorkbook - CVNet Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
879	Data Collection Workbook - SurgiNet Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
880	Data Collections Woorkbook - Supplies Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
881	Data Collection Workbook- Registration Management Room and Bed > Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
882	Data Collections Woorkbook - Helix Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
883	Data Collections Woorkbook - Ambulatory Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
884	Data Collections Woorkbook - HLA Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
885	Data Collections Woorkbook - Documentation Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
886	**Task 5 Complete Partial System Build (BUILD)**	**23 wks**	**Mon 7/15/13**	**Fri 12/20/13**	
887	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
888	Work Package: Charge Services - Base Build	14 wks	Mon 7/15/13	Fri 10/18/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
889	Work Package: Charge Services - RadNet	14 wks	Mon 9/9/13	Fri 12/13/13	869
890	Work Package: Charge Services - Anatomic Pathology	14 wks	Mon 9/9/13	Fri 12/13/13	870
891	Work Package: Charge Services - Blood Bank Transfusion	14 wks	Mon 9/9/13	Fri 12/13/13	871
892	Work Package: Charge Services - Microbiology	14 wks	Mon 9/9/13	Fri 12/13/13	872
893	Work Package: Charge Services - General Laboratory	14 wks	Mon 9/9/13	Fri 12/13/13	873
894	Work Package: Charge Services - CareNet Orders	14 wks	Mon 9/9/13	Fri 12/13/13	874
895	Work Package: Charge Services - Therapies	14 wks	Mon 9/9/13	Fri 12/13/13	875
896	Work Package: Charge Services - FirstNet	14 wks	Mon 9/9/13	Fri 12/13/13	876
897	Work Package: Charge Services - PharmNet	14 wks	Mon 9/9/13	Fri 12/13/13	877
898	Work Package: Charge Services - CVNet	14 wks	Mon 9/9/13	Fri 12/13/13	878
899	Work Package: Charge Services - SurgiNet	14 wks	Mon 9/9/13	Fri 12/13/13	879
900	Work Package: Charge Services - Supplies	14 wks	Mon 9/9/13	Fri 12/13/13	880
901	Work Package: Charge Services - Room and Bed Charges	14 wks	Mon 9/9/13	Fri 12/13/13	881
902	Work Package: Charge Services - Helix	14 wks	Mon 9/9/13	Fri 12/13/13	882
903	Work Package: Charge Services - Ambulatory	14 wks	Mon 9/9/13	Fri 12/13/13	883
904	Work Package: Charge Services - HLA	14 wks	Mon 9/9/13	Fri 12/13/13	884
905	Work Package: Charge Services - Documentation (Powerforms and IView)	14 wks	Mon 9/9/13	Fri 12/13/13	885
906	Work Package: Charge Services - Charge Transformation Rules	14 wks	Mon 7/15/13	Fri 10/18/13	8
907	Subtask 5.2 Complete Initial Partial Build	1 wk	Mon 12/16/13	Fri 12/20/13	905
908	**Task 6 Conduct System Validation**	**17 wks**	**Mon 12/16/13**	**Fri 4/11/14**	
909	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
910	Subtask 6.2 Conduct System Validation Session Follow-up	4 mons	Mon 12/23/13	Fri 4/11/14	909
911	**Task 7 Complete Build of Charge Services and Conduct Unit and System Testing**	**10.2 wks**	**Mon 12/23/13**	**Mon 3/3/14**	
912	Subtask 7.1 Complete System Build	1 wk	Mon 12/23/13	Fri 12/27/13	886
913	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	1 day	Mon 3/3/14	Mon 3/3/14	961SS
914	Subtask 7.3 Complete Unit and System Testing	1 day	Mon 3/3/14	Mon 3/3/14	961SS
915	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
916	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
917	QC Test: Charge Services - RadNet	3 wks	Mon 12/16/13	Fri 1/3/14	889
918	QC Test: Charge Services - Anatomic Pathology	3 wks	Mon 12/16/13	Fri 1/3/14	890
919	QC Test: Charge Services - Blood Bank Transfusion	3 wks	Mon 12/16/13	Fri 1/3/14	891

ID	Task Name	Duration	Start	Finish	Predecessors
920	QC Test: Charge Services - Microbiology	3 wks	Mon 12/16/13	Fri 1/3/14	892
921	QC Test: Charge Services - General Laboratory	3 wks	Mon 12/16/13	Fri 1/3/14	893
922	QC Test: Charge Services - CareNet Orders	3 wks	Mon 12/16/13	Fri 1/3/14	894
923	QC Test: Charge Services - Therapies	3 wks	Mon 12/16/13	Fri 1/3/14	895
924	QC Test: Charge Services - FirstNet	3 wks	Mon 12/16/13	Fri 1/3/14	896
925	QC Test: Charge Services - PharmNet	3 wks	Mon 12/16/13	Fri 1/3/14	897
926	QC Test: Charge Services - CVNet	3 wks	Mon 12/16/13	Fri 1/3/14	898
927	QC Test: Charge Services - SurgiNet	3 wks	Mon 12/16/13	Fri 1/3/14	899
928	QC Test: Charge Services - Supplies	3 wks	Mon 12/16/13	Fri 1/3/14	900
929	QC Test: Charge Services - Room and Bed Charges	3 wks	Mon 12/16/13	Fri 1/3/14	901
930	QC Test: Charge Services - Documentation (Powerforms and IView)	3 wks	Mon 12/16/13	Fri 1/3/14	905
931	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
932	Localize Unit Test Scripts - Charge Services	5 wks	Mon 12/16/13	Fri 1/17/14	11
933	Unit Test Scripts - Charge Services	3 wks	Mon 1/20/14	Fri 2/7/14	932
934	Unit Test: Charge Services - RadNet	3 wks	Mon 2/10/14	Fri 2/28/14	889,917,933
935	Unit Test: Charge Services - Anatomic Pathology	3 wks	Mon 2/10/14	Fri 2/28/14	890,918,933
936	Unit Test: Charge Services - Blood Bank Transfusion	3 wks	Mon 2/10/14	Fri 2/28/14	891,919,933
937	Unit Test: Charge Services - Microbiology	3 wks	Mon 2/10/14	Fri 2/28/14	892,920,933
938	Unit Test: Charge Services - General Laboratory	3 wks	Mon 2/10/14	Fri 2/28/14	893,921,933
939	Unit Test: Charge Services - CareNet Orders	3 wks	Mon 2/10/14	Fri 2/28/14	894,922,933
940	Unit Test: Charge Services - Therapies	3 wks	Mon 2/10/14	Fri 2/28/14	895,923,933
941	Unit Test: Charge Services - FirstNet	3 wks	Mon 2/10/14	Fri 2/28/14	896,924,933
942	Unit Test: Charge Services - PharmNet	3 wks	Mon 2/10/14	Fri 2/28/14	897,925,933
943	Unit Test: Charge Services - CVNet	3 wks	Mon 2/10/14	Fri 2/28/14	898,926,933
944	Unit Test: Charge Services - SurgiNet	3 wks	Mon 2/10/14	Fri 2/28/14	899,927,933
945	Unit Test: Charge Services - Supplies	3 wks	Mon 2/10/14	Fri 2/28/14	900,928,933
946	Unit Test: Charge Services - Room and Bed Charges	3 wks	Mon 2/10/14	Fri 2/28/14	901,929,933
947	Unit Test: Charge Services - Helix	3 wks	Mon 2/10/14	Fri 2/28/14	902,933
948	Unit Test: Charge Services - Ambulatory	3 wks	Mon 2/10/14	Fri 2/28/14	903,933
949	Unit Test: Charge Services - Base Build	3 wks	Mon 2/10/14	Fri 2/28/14	888,933
950	Unit Test: Charge Services - HLA	3 wks	Mon 2/10/14	Fri 2/28/14	904,933
951	Unit Test: Charge Services - Charge Transformation Rules	3 wks	Mon 2/10/14	Fri 2/28/14	906,933
952	Unit Test: Charge Services - Documentation (Powerforms and IView)	3 wks	Mon 2/10/14	Fri 2/28/14	905,930,933

ID	Task Name	Duration	Start	Finish	Predecessors
953	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
954	Localize System Test Tracking and Scripts - Charge Services	1 wk	Mon 12/16/13	Fri 12/20/13	11
955	First Draft System Test Scripts - Charge Services	2 wks	Mon 12/23/13	Fri 1/3/14	954
956	Final System Test Scripts - Charge Services	2 wks	Mon 12/23/13	Fri 1/3/14	954
957	Complete System Testing - Charge Services	3 wks	Mon 1/6/14	Fri 1/24/14	956
958	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
959	Integration Test Scripts - Patient Accounting	5 wks	Mon 12/16/13	Fri 1/17/14	11
960	Complete Integration Testing - Patient Accounting	5 wks	Mon 1/20/14	Fri 2/21/14	959
961	Milestone: Conclude All Testing - Charge Services	0 days	Fri 2/28/14	Fri 2/28/14	934,935,936,937,938,9
962	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
963	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
964	Conversion Readiness Assessment - Charge Services	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
965	Review & Update Conversion Cutover Plan (sent by IA) - Charge Services	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
966	Complete the Turnover Process documentation- Charge Services	5 wks	Mon 6/30/14	Fri 8/1/14	18
967	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
968	Complete Post Conversion Assessment Workbook for Charge Services	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
969	**SOW #17 - Clinical Data Repository and Reporting (Clinical Reporting / XR)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
970	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
971	Subtask 1.1 Develop detailed Sub-Project Work Plan - Clinical Data Repository and Reporting	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
972	Subtask 1.2 Conduct Initiation session for Clinical Data Repository and Reporting Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
973	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
974	**DESIGN**	**50 wks**	**Mon 4/29/13**	**Fri 4/11/14**	
975	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**9 wks**	**Mon 4/29/13**	**Fri 6/28/13**	
976	Conduct Open House Demo Session - ClinRep	1 wk	Mon 5/20/13	Fri 5/24/13	7
977	Conduct Open House Demo Session - Clinical Reporting XR	1 wk	Mon 5/20/13	Fri 5/24/13	7
978	Complete WBT - Clinical Reporting	4 wks	Mon 4/29/13	Fri 5/24/13	5
979	Complete WBT - Clinical Reporting XR	4 wks	Mon 4/29/13	Fri 5/24/13	5
980	Conduct Open House Demo Session - Clinical Reporting	1 wk	Mon 4/29/13	Fri 5/3/13	5
981	Conduct Open House Demo Session - Clinical Reporting XR	1 wk	Mon 4/29/13	Fri 5/3/13	5
982	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
983	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - Clinical Reporting)	1 wk	Mon 5/20/13	Fri 5/24/13	7
984	Onsite Workflow Assessment - Clinical Reporting XR	1 wk	Mon 5/20/13	Fri 5/24/13	7
985	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/24/13	Fri 6/28/13	983FS+4 wks
986	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/8/13**	**Fri 11/1/13**	
987	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/8/13	Fri 7/12/13	8SS
988	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/15/13	Fri 11/1/13	987
989	**Task 4 Conduct Design Review**	**10 wks**	**Mon 9/30/13**	**Fri 12/6/13**	
990	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
991	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/28/13	Fri 11/1/13	990FS+3 wks
992	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/28/13	Fri 11/1/13	990FS+3 wks
993	Subtask 4.4 Conduct Clinical Data Repository and Reporting Workflow Workshop	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
994	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 12/2/13	Fri 12/6/13	992FS+4 wks
995	**Data Collection**	**39 wks**	**Mon 7/15/13**	**Fri 4/11/14**	
996	Data Collection Workbook - Clinical Reporting Section Design	8 wks	Mon 7/15/13	Fri 9/6/13	8
997	Data Collection Workbook - Clinical Reporting Distribution and Expedite> Device Cross Reference Tab	8 wks	Mon 2/17/14	Fri 4/11/14	12
998	Data Collection Workbook - Clinical Reporting Chart Format Layout	8 wks	Mon 10/7/13	Fri 11/29/13	9
999	Data Collection Workbook - Clinical Reporting Chart Section Design	8 wks	Mon 7/15/13	Fri 9/6/13	8
1000	Data Collection Workbook - Clinical Reporting XR Page Master Design	8 wks	Mon 7/15/13	Fri 9/6/13	8
1001	Data Collection Workbook - Clinical Reporting Distribution and Expedite> Distribution Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1002	Data Collection Workbook - Clinical Reporting Distribution and Expedite> Expedites tab and ARB Expedites tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1003	Data Collection Workbook - Clinical Reporting XR Report Section Layout> Manual Expedite tab	8 wks	Mon 10/7/13	Fri 11/29/13	9
1004	Data Collection Workbook - Clinical Reporting Chart Format Layout > Authorized Positions and Bedrock Core security	8 wks	Mon 10/7/13	Fri 11/29/13	9
1005	Data Collection Workbook - Print Services	8 wks	Mon 7/15/13	Fri 9/6/13	8
1006	Data Collection Workbook - Clinical Reporting XR Report Template Layout	8 wks	Mon 10/7/13	Fri 11/29/13	9

ID	Task Name	Duration	Start	Finish	Predecessors
1007	Data Collection Workbook - Clinical Reporting XR Report Section Design	8 wks	Mon 7/15/13	Fri 9/6/13	8
1008	Data Collection Workbook - Clinical Reporting XR Page Master Design	8 wks	Mon 7/15/13	Fri 9/6/13	8
1009	Data Collection Workbook - Clinical Reporting Distribution and Expedite>Distribution Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1010	Data Collection Workbook - Clinical Reporting Distribution and Expedite> Expedites and ARB Expedites tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
1011	Data Collection Workbook - Clinical Reporting XR Report Template Layout>Manual Expedite tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1012	Data Collection Workbook - Clinical Reporting Distribution and Expedite> Device Cross Reference Tab	8 wks	Mon 2/17/14	Fri 4/11/14	12
1013	Data Collection Workbook - Core Security > Priv Tab > Clinical Reporting XR	8 wks	Mon 10/7/13	Fri 11/29/13	9
1014	Data Collection Workbook - Print Services	8 wks	Mon 7/15/13	Fri 9/6/13	8
1015	**Task 5 Complete Partial System Build (BUILD)**	**53 wks**	**Mon 7/15/13**	**Fri 7/18/14**	
1016	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
1017	Work Package: Clinical Reporting - Reference Lab Footnotes	14 wks	Mon 9/9/13	Fri 12/13/13	996
1018	Work Package: Clinical Reporting - Device Cross Reference	14 wks	Mon 4/14/14	Fri 7/18/14	997
1019	Work Package: Clinical Reporting - AP Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	998,999
1020	Work Package: Clinical Reporting - Clinical Documentation Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	998,999
1021	Work Package: Clinical Reporting - Lab Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	998,999
1022	Work Package: Clinical Reporting - Rad Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	998,999
1023	Work Package: Clinical Reporting - Master Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	998,999
1024	Work Package: Clinical Reporting - MRP	14 wks	Mon 12/2/13	Fri 3/7/14	998
1025	Work Package: Clinical Reporting - Headers Footers	14 wks	Mon 9/9/13	Fri 12/13/13	1000
1026	Work Package: Clinical Reporting - Distributions and Ops Jobs	14 wks	Mon 9/9/13	Fri 12/13/13	1001
1027	Work Package: Clinical Reporting - Expedites	14 wks	Mon 9/9/13	Fri 12/13/13	1002
1028	Work Package: Clinical Reporting - Manual Expedite	14 wks	Mon 12/2/13	Fri 3/7/14	1003
1029	Work Package: Clinical Reporting - Core Security	14 wks	Mon 12/2/13	Fri 3/7/14	1004
1030	Work Package: Clinical Reporting - Devices	14 wks	Mon 9/9/13	Fri 12/13/13	1005
1031	Work Package: Clinical Reporting - Purge Jobs	14 wks	Mon 7/15/13	Fri 10/18/13	8
1032	Work Package: Clinical Reporting XR - AP Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	1006,1007
1033	Work Package: Clinical Reporting XR - Clinical Documentation Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	1006,1007

ID	Task Name	Duration	Start	Finish	Predecessors
1034	Work Package: Clinical Reporting XR - Lab Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	1006,1007
1035	Work Package: Clinical Reporting XR - Rad Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	1006,1007
1036	Work Package: Clinical Reporting XR - Master Report Sections	14 wks	Mon 12/2/13	Fri 3/7/14	1006,1007
1037	Work Package: Clinical Reporting XR - Headers Footers	14 wks	Mon 9/9/13	Fri 12/13/13	1008
1038	Work Package: Clinical Reporting XR - Distributions and Ops Jobs	14 wks	Mon 9/9/13	Fri 12/13/13	1009
1039	Work Package: Clinical Reporting XR - Expedites	14 wks	Mon 9/9/13	Fri 12/13/13	1010
1040	Work Package: Clinical Reporting XR - Manual Expedite	14 wks	Mon 9/9/13	Fri 12/13/13	1011
1041	Work Package: Clinical Reporting XR - Performing Lab Footnotes	14 wks	Mon 9/9/13	Fri 12/13/13	1008
1042	Work Package: Clinical Reporting XR - Device Cross Reference	14 wks	Mon 4/14/14	Fri 7/18/14	1012
1043	Work Package: Clinical Reporting XR - Core Security	14 wks	Mon 12/2/13	Fri 3/7/14	1013
1044	Work Package: Clinical Reporting XR - Devices	14 wks	Mon 9/9/13	Fri 12/13/13	1014
1045	Work Package: Clinical Reporting XR - Purge Jobs	14 wks	Mon 7/15/13	Fri 10/18/13	8
1046	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	1044
1047	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/9/13**	**Fri 1/10/14**	
1048	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/9/13	Fri 12/13/13	11SS
1049	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/16/13	Fri 1/10/14	1048
1050	**Task 7 Complete Build of Clinical Data Repository and Reporting and Conduct Unit and System Testing (TEST)**	**42 wks**	**Mon 10/21/13**	**Fri 8/8/14**	
1051	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	1046
1052	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	7.5 mons	Mon 12/16/13	Fri 7/11/14	1051
1053	**Quality Center Testing**	**23 wks**	**Mon 10/21/13**	**Fri 3/28/14**	
1054	QC Test: Clinical Reporting - AP Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1019
1055	QC Test: Clinical Reporting - Clinical Documentation Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1020
1056	QC Test: Clinical Reporting - Lab Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1021
1057	QC Test: Clinical Reporting - Rad Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1022
1058	QC Test: Clinical Reporting - Master Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1023
1059	QC Test: Clinical Reporting - MRP	3 wks	Mon 3/10/14	Fri 3/28/14	1024
1060	QC Test: Clinical Reporting - Headers Footers	3 wks	Mon 12/16/13	Fri 1/3/14	1025
1061	QC Test: Clinical Reporting - Distributions and Ops Jobs	3 wks	Mon 12/16/13	Fri 1/3/14	1026
1062	QC Test: Clinical Reporting - Expedites	3 wks	Mon 12/16/13	Fri 1/3/14	1027
1063	QC Test: Clinical Reporting - Manual Expedite	3 wks	Mon 3/10/14	Fri 3/28/14	1028
1064	QC Test: Clinical Reporting - Purge Jobs	3 wks	Mon 10/21/13	Fri 11/8/13	1031

ID	Task Name	Duration	Start	Finish	Predecessors
1065	QC Test: Clinical Reporting XR - AP Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1032
1066	QC Test: Clinical Reporting XR - Clinical Documentation Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1033
1067	QC Test: Clinical Reporting XR - Lab Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1034
1068	QC Test: Clinical Reporting XR - Rad Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1035
1069	QC Test: Clinical Reporting XR - Master Report Sections	3 wks	Mon 3/10/14	Fri 3/28/14	1036
1070	QC Test: Clinical Reporting XR - Headers Footers	3 wks	Mon 12/16/13	Fri 1/3/14	1037
1071	QC Test: Clinical Reporting XR - Distributions and Ops Jobs	3 wks	Mon 12/16/13	Fri 1/3/14	1038
1072	QC Test: Clinical Reporting XR - Expedites	3 wks	Mon 12/16/13	Fri 1/3/14	1039
1073	QC Test: Clinical Reporting XR - Manual Expedite	3 wks	Mon 12/16/13	Fri 1/3/14	1040
1074	**Unit Testing**	**34 wks**	**Mon 12/16/13**	**Fri 8/8/14**	
1075	Localize Unit Test Scripts - Clinical Reporting	5 wks	Mon 12/16/13	Fri 1/17/14	11
1076	Localize Unit Test Scripts - Clinical Reporting XR	5 wks	Mon 12/16/13	Fri 1/17/14	11
1077	Unit Test Scripts - Clinical Reporting	3 wks	Mon 1/20/14	Fri 2/7/14	1075
1078	Unit Test Scripts - Clinical Reporting XR	3 wks	Mon 1/20/14	Fri 2/7/14	1076
1079	Unit Test: Clinical Reporting - Reference Lab Footnotes	3 wks	Mon 2/10/14	Fri 2/28/14	1017,1078
1080	Unit Test: Clinical Reporting - Device Cross Reference	3 wks	Mon 7/21/14	Fri 8/8/14	1018,1078
1081	Unit Test: Clinical Reporting - AP Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1019,1078,1054
1082	Unit Test: Clinical Reporting - Clinical Documentation Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1020,1078,1055
1083	Unit Test: Clinical Reporting - Lab Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1021,1078,1056
1084	Unit Test: Clinical Reporting - Rad Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1022,1078,1057
1085	Unit Test: Clinical Reporting - Master Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1023,1078,1058
1086	Unit Test: Clinical Reporting - MRP	3 wks	Mon 3/31/14	Fri 4/18/14	1024,1078,1059
1087	Unit Test: Clinical Reporting - Headers Footers	3 wks	Mon 2/10/14	Fri 2/28/14	1025,1078,1060
1088	Unit Test: Clinical Reporting - Distributions and Ops Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1026,1078,1061
1089	Unit Test: Clinical Reporting - Expedites	3 wks	Mon 2/10/14	Fri 2/28/14	1027,1077,1062
1090	Unit Test: Clinical Reporting - Manual Expedite	3 wks	Mon 3/31/14	Fri 4/18/14	1028,1077,1063
1091	Unit Test: Clinical Reporting - Core Security	3 wks	Mon 3/10/14	Fri 3/28/14	1029,1077
1092	Unit Test: Clinical Reporting - Devices	3 wks	Mon 2/10/14	Fri 2/28/14	1030,1077
1093	Unit Test: Clinical Reporting - Purge Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1031,1077,1064
1094	Unit Test: Clinical Reporting XR - AP Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1032,1077,1065
1095	Unit Test: Clinical Reporting XR - Clinical Documentation Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1033,1077,1066
1096	Unit Test: Clinical Reporting XR - Lab Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1034,1077,1067
1097	Unit Test: Clinical Reporting XR - Rad Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1035,1077,1068

ID	Task Name	Duration	Start	Finish	Predecessors
1098	Unit Test: Clinical Reporting XR - Master Report Sections	3 wks	Mon 3/31/14	Fri 4/18/14	1036,1077,1069
1099	Unit Test: Clinical Reporting XR - Headers Footers	3 wks	Mon 2/10/14	Fri 2/28/14	1037,1077,1070
1100	Unit Test: Clinical Reporting XR - Distributions and Ops Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1038,1077,1071
1101	Unit Test: Clinical Reporting XR - Expedites	3 wks	Mon 2/10/14	Fri 2/28/14	1039,1077,1072
1102	Unit Test: Clinical Reporting XR - Manual Expedite	3 wks	Mon 2/10/14	Fri 2/28/14	1040,1077,1073
1103	Unit Test: Clinical Reporting XR - Performing Lab Footnotes	3 wks	Mon 2/10/14	Fri 2/28/14	1041,1077
1104	Unit Test: Clinical Reporting XR - Device Cross Reference	3 wks	Mon 7/21/14	Fri 8/8/14	1042,1077
1105	Unit Test: Clinical Reporting XR - Core Security	3 wks	Mon 3/10/14	Fri 3/28/14	1043,1077
1106	Unit Test: Clinical Reporting XR - Devices	3 wks	Mon 2/10/14	Fri 2/28/14	1044,1077
1107	Unit Test: Clinical Reporting XR - Purge Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1045,1077
1108	**System Testing**	**8 wks**	**Mon 12/16/13**	**Fri 2/7/14**	
1109	Localize System Test Tracking and Scripts - Clinical Reporting	1 wk	Mon 12/16/13	Fri 12/20/13	11
1110	Localize System Test Tracking and Scripts - Clinical Reporting XR	1 wk	Mon 12/16/13	Fri 12/20/13	11
1111	First Draft System Test Scripts - Clinical Reporting	2 wks	Mon 12/23/13	Fri 1/3/14	1109
1112	First Draft System Test Scripts - Clinical Reporting XR	2 wks	Mon 12/23/13	Fri 1/3/14	1110
1113	Final System Test Scripts - Clinical Reporting	2 wks	Mon 1/6/14	Fri 1/17/14	1111
1114	Final System Test Scripts - Clinical Reporting XR	2 wks	Mon 1/6/14	Fri 1/17/14	1112
1115	Complete System Testing - Clinical Reporting	3 wks	Mon 1/20/14	Fri 2/7/14	1113
1116	Complete System Testing - Clinical Reporting XR	3 wks	Mon 1/20/14	Fri 2/7/14	1114
1117	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1118	Integration Test Scripts - Clinical Reporting	5 wks	Mon 12/16/13	Fri 1/17/14	11
1119	Integration Test Scripts - Clinical Reporting XR	5 wks	Mon 12/16/13	Fri 1/17/14	11
1120	Complete Integration Testing - Clinical Reporting	5 wks	Mon 1/20/14	Fri 2/21/14	1118
1121	Complete Integration Testing - Clinical Reporting XR	5 wks	Mon 1/20/14	Fri 2/21/14	1119
1122	Milestone: Conclude All Testing - Clinical Reporting	0 days	Fri 8/8/14	Fri 8/8/14	1115,1120,1093,1092,
1123	Milestone: Conclude All Testing - Clinical Reporting XR	0 days	Fri 8/8/14	Fri 8/8/14	1077,1078,1116,1121,
1124	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 8/8/14	Fri 8/8/14	1123FS-1 day
1125	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1126	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1127	Conversion Readiness Assessment - Clinical Reporting	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1128	Conversion Readiness Assessment - Clinical Reporting XR	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1129	Review & Update Conversion Cutover Plan (sent by IA) - Clinical Reporting	3 wks	Mon 4/14/14	Fri 5/2/14	14SS

ID	Task Name	Duration	Start	Finish	Predecessors
1130	Review & Update Conversion Cutover Plan (sent by IA) - Clinical Reporting XR	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1131	Complete the Turnover Process documentation- Clinical Reporting	5 wks	Mon 6/30/14	Fri 8/1/14	18
1132	Complete the Turnover Process documentation- Clinical Reporting XR	5 wks	Mon 6/30/14	Fri 8/1/14	18
1133	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1134	Complete Post Conversion Assessment Workbook for Clinical Reporting	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1135	Complete Post Conversion Assessment Workbook for Clinical Reporting XF	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1136	**SOW #20 - Interfaces (Interfaces (Clinical / Financial / Migration))**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
1137	**Task 1 Conduct SOW Kick-off**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
1138	Subtask 1.1 Develop Sub-Project Work Plan for Interfaces	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
1139	Subtask 1.2 Initiation Session for Interfaces Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
1140	**DESIGN**	**12 wks**	**Mon 5/20/13**	**Fri 8/9/13**	
1141	**Task 2 Perform Current State Assessment (Establish Context for Design)**	**7 wks**	**Mon 5/20/13**	**Fri 7/5/13**	
1142	Onsite Workflow Assessment - Clinical System Interface	1 wk	Mon 5/20/13	Fri 5/24/13	7
1143	Onsite Workflow Assessment - Financial System Interface	1 wk	Mon 5/20/13	Fri 5/24/13	7
1144	Subtask 2.1 Document Interfaces Current State Assessment	1 wk	Mon 6/10/13	Fri 6/14/13	1143FS+2 wks
1145	Subtask 2.2 Prepare Interfaces Implementation Strategy Document	3 wks	Mon 6/17/13	Fri 7/5/13	1144
1146	**Task 3 Design Interfaces**	**5 wks**	**Mon 7/8/13**	**Fri 8/9/13**	
1147	Subtask 3.1 Document Functional and Technical Specifications for Interfaces	3 wks	Mon 7/8/13	Fri 7/26/13	1141
1148	Subtask 3.2 Develop Interface Test Plan	2 wks	Mon 7/29/13	Fri 8/9/13	1147
1149	**Data Collection**	**2 wks**	**Mon 7/15/13**	**Fri 7/26/13**	
1150	V1_Pt. Accounting_Interface_CS 354_367.xls	1 wk	Mon 7/15/13	Fri 7/19/13	8
1151	Unit 2 Specs - Clinical Interfaces	1 wk	Mon 7/15/13	Fri 7/19/13	8
1152	Unit 2 Specs - Financial Interfaces	1 wk	Mon 7/15/13	Fri 7/19/13	8
1153	Standard Interface FTP Spreadsheet.xls	2 wks	Mon 7/15/13	Fri 7/26/13	8
1154	FSI Connectivity Spreadsheet	2 wks	Mon 7/15/13	Fri 7/26/13	8
1155	**Task 4 Build and Test Interfaces (BUILD)**	**25 wks**	**Mon 7/22/13**	**Fri 1/10/14**	
1156	Subtask 4.1 Build and Test Interfaces	14 wks	Mon 10/7/13	Fri 1/10/14	9
1157	Work Package: FSI - Interface Build (Interface 1) - Clinical	14 wks	Mon 7/29/13	Fri 11/1/13	1151,1153,1154
1158	Work Package: FSI - Interface Build (Interface 1) - Financial	14 wks	Mon 7/22/13	Fri 10/25/13	1152,1150
1159	Work Package: FSI - Migration - Classic CERT to Millennium BUILD: Monitor build of V5U in Classic CERT	14 wks	Mon 10/7/13	Fri 1/10/14	9

ID	Task Name	Duration	Start	Finish	Predecessors
1160	Work Package: FSI - Migration - Classic CERT to Millennium PROD: Monitor build of V5U in Classic CERT	14 wks	Mon 10/7/13	Fri 1/10/14	9
1161	Work Package: FSI - Migration - Classic PROD to Millennium PROD: Monitor build of V5U in Classic PROD	14 wks	Mon 10/7/13	Fri 1/10/14	9
1162	Work Package: FSI - Migration - Classic PROD to Millennium BUILD: Monitor build of V5U in Classic PROD	14 wks	Mon 10/7/13	Fri 1/10/14	9
1163	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1164	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1165	Localize Unit Test Scripts - Clinical Interface	5 wks	Mon 12/16/13	Fri 1/17/14	11
1166	Localize Unit Test Scripts - Financial Interface	5 wks	Mon 12/16/13	Fri 1/17/14	11
1167	Unit Test Scripts - Clinical Interface	3 wks	Mon 1/20/14	Fri 2/7/14	1165
1168	Unit Test Scripts - Financial Interface	3 wks	Mon 1/20/14	Fri 2/7/14	1166
1169	Unit Test: FSI - Interface Build (Interface 1) - Clinical	3 wks	Mon 2/10/14	Fri 2/28/14	1157,1167
1170	Unit Test: FSI - Interface Build (Interface 1) - Financial	3 wks	Mon 2/10/14	Fri 2/28/14	1158,1168
1171	Unit Test: FSI - Migration - History Upload Classic CERT to Millennium BUILD	3 wks	Mon 1/13/14	Fri 1/31/14	1159
1172	Unit Test: FSI - Migration - History Upload Classic PROD to Millennium BUILD	3 wks	Mon 1/13/14	Fri 1/31/14	1160
1173	Unit Test: FSI - Migration - History Upload Classic CERT to Millennium PROD	3 wks	Mon 1/13/14	Fri 1/31/14	1161
1174	Unit Test: FSI - Migration - History Upload Classic PROD to Millennium PROD	3 wks	Mon 1/13/14	Fri 1/31/14	1162
1175	**System Testing**	**8 wks**	**Mon 12/16/13**	**Fri 2/7/14**	
1176	Localize System Test Tracking and Scripts - Clinical Interface	1 wk	Mon 12/16/13	Fri 12/20/13	11
1177	Localize System Test Tracking and Scripts - Financial Interface	1 wk	Mon 12/16/13	Fri 12/20/13	11
1178	First Draft System Test Scripts - Clinical Interface	2 wks	Mon 12/23/13	Fri 1/3/14	1176
1179	First Draft System Test Scripts - Financial Interface	2 wks	Mon 12/23/13	Fri 1/3/14	1177
1180	Final System Test Scripts - Clinical Interface	2 wks	Mon 1/6/14	Fri 1/17/14	1178
1181	Final System Test Scripts - Financial Interface	2 wks	Mon 1/6/14	Fri 1/17/14	1179
1182	Complete System Testing - Clinical Interface	3 wks	Mon 1/20/14	Fri 2/7/14	1180
1183	Complete System Testing - Financial Interface	3 wks	Mon 1/20/14	Fri 2/7/14	1181
1184	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1185	Integration Test Scripts - Clinical Interface	5 wks	Mon 12/16/13	Fri 1/17/14	11
1186	Integration Test Scripts - Financial Interface	5 wks	Mon 12/16/13	Fri 1/17/14	11

ID	Task Name	Duration	Start	Finish	Predecessors
1187	Complete Integration Testing - Clinical Interface	5 wks	Mon 1/20/14	Fri 2/21/14	1185
1188	Complete Integration Testing - Financial Interface	5 wks	Mon 1/20/14	Fri 2/21/14	1186
1189	Milestone: Conclude All Testing - Clinical Interface	0 days	Fri 2/28/14	Fri 2/28/14	1167,1169,1182,1187,
1190	Milestone: Conclude All Testing - Financial Interface	0 days	Fri 2/28/14	Fri 2/28/14	1168,1183,1188,1170
1191	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1192	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1193	Conversion Readiness Assessment - Clinical Interface	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1194	Conversion Readiness Assessment - Financial Interface	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1195	Review & Update Conversion Cutover Plan (sent by IA) - Clinical Interface	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1196	Review & Update Conversion Cutover Plan (sent by IA) - Financial Interface	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1197	Begin Migration History Uploads	1 wk	Mon 6/16/14	Fri 6/20/14	18SS-1 wk
1198	Complete the Turnover Process documentation- Clinical Interface	5 wks	Mon 6/30/14	Fri 8/1/14	18
1199	Complete the Turnover Process documentation- Financial Interface	5 wks	Mon 6/30/14	Fri 8/1/14	18
1200	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1201	Complete Post Conversion Assessment Workbook for Clinical Interface	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1202	Complete Post Conversion Assessment Workbook for Financial Interface	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1203	**Print Services**	**55 wks**	**Mon 7/15/13**	**Fri 8/1/14**	
1204	**DESIGN**	**38 wks**	**Mon 7/15/13**	**Fri 4/4/14**	
1205	Data Collection Workbook - Print Services	8 wks	Mon 7/15/13	Fri 9/6/13	8
1206	Test Printers available	8 wks	Mon 12/9/13	Fri 1/31/14	11SS
1207	PROD Printers available	8 wks	Mon 2/10/14	Fri 4/4/14	12SS
1208	**BUILD**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
1209	Work Package: Printers	14 wks	Mon 9/9/13	Fri 12/13/13	1205
1210	**TEST**	**19 wks**	**Mon 12/16/13**	**Fri 4/25/14**	
1211	Unit Test: Printers	3 wks	Mon 4/7/14	Fri 4/25/14	1209,1206,1207
1212	Complete System Testing - Printers	4 wks	Mon 12/16/13	Fri 1/10/14	1209
1213	Complete Integration Testing - Printers	5 wks	Mon 12/16/13	Fri 1/17/14	1209
1214	Milestone: Conclude All Testing - Printers	0 days	Fri 4/25/14	Fri 4/25/14	1211,1212,1213
1215	**CONVERSION**	**5 wks**	**Mon 6/30/14**	**Fri 8/1/14**	
1216	Complete the Turnover Process documentation- Printers	5 wks	Mon 6/30/14	Fri 8/1/14	18
1217	**PowerInsight (Explorer / Enterprise Data Warehouse)**	**70 wks**	**Mon 5/20/13**	**Fri 9/19/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1218	**DESIGN**	**16 wks**	**Mon 5/20/13**	**Fri 9/6/13**	
1219	**Establish Context for Design**	**1 wk**	**Mon 5/20/13**	**Fri 5/24/13**	
1220	Conduct Open House Demo Session - PowerInsight Explorer	1 wk	Mon 5/20/13	Fri 5/24/13	7
1221	Conduct Open House Demo Session - PowerInsight Enterprise Data Warehouse	1 wk	Mon 5/20/13	Fri 5/24/13	7
1222	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
1223	Data Collection Workbook - PowerInsight Explorer	8 wks	Mon 7/15/13	Fri 9/6/13	8
1224	DDM > PowerInsight Explorer	8 wks	Mon 7/15/13	Fri 9/6/13	8
1225	Data Collection Workbook - PowerInsight Enterprise Data Warehouse	8 wks	Mon 7/15/13	Fri 9/6/13	8
1226	DDM > PowerInsight Enterprise Data Warehouse	8 wks	Mon 7/15/13	Fri 9/6/13	8
1227	**BUILD**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
1228	Work Package: PowerInsight Explorer - Data Mapping	14 wks	Mon 9/9/13	Fri 12/13/13	1223,1224
1229	Work Package: PowerInsight Explorer - Standard Templates	14 wks	Mon 9/9/13	Fri 12/13/13	1223,1224
1230	Work Package: PowerInsight Explorer - Security	14 wks	Mon 9/9/13	Fri 12/13/13	1223,1224
1231	Work Package: PowerInsight Explorer - Alerts	14 wks	Mon 9/9/13	Fri 12/13/13	1223,1224
1232	Work Package: PowerInsight Explorer - Custom Reports	14 wks	Mon 9/9/13	Fri 12/13/13	1223,1224
1233	Work Package: PowerInsight EDW - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1234	Work Package: PowerInsight EDW - Extract Rules in the Cerner Millennium Source Domain	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1235	Work Package: PowerInsight EDW - Row-Level Security	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1236	Work Package: PowerInsight EDW - Operations Jobs	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1237	Work Package: PowerInsight EDW - Informatica Data Loads	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1238	Work Package: PowerInsight EDW - Initial Extract and Load Processes	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1239	Work Package: PowerInsight EDW - Manual Extract and Load Runs	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1240	Work Package: PowerInsight EDW - Informatica Model Repository	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1241	Work Package: PowerInsight EDW - Servers and Services	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1242	Work Package: PowerInsight EDW - Business Objects User Accounts and Groups	14 wks	Mon 9/9/13	Fri 12/13/13	1225,1226
1243	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1244	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1245	Localize Unit Test Scripts - PowerInsight Explorer	5 wks	Mon 12/16/13	Fri 1/17/14	11
1246	Localize Unit Test Scripts - PowerInsight Enterprise Data Warehouse	5 wks	Mon 12/16/13	Fri 1/17/14	11
1247	Unit Test Scripts - PowerInsight Explorer	3 wks	Mon 1/20/14	Fri 2/7/14	1245
1248	Unit Test Scripts - PowerInsight Enterprise Data Warehouse	3 wks	Mon 1/20/14	Fri 2/7/14	1246

ID	Task Name	Duration	Start	Finish	Predecessors
1249	Unit Test: PowerInsight Explorer - Data Mapping	3 wks	Mon 2/10/14	Fri 2/28/14	1248,1228
1250	Unit Test: PowerInsight Explorer - Standard Templates	3 wks	Mon 2/10/14	Fri 2/28/14	1248,1229
1251	Unit Test: PowerInsight Explorer - Security	3 wks	Mon 2/10/14	Fri 2/28/14	1248,1230
1252	Unit Test: PowerInsight Explorer - Alerts	3 wks	Mon 2/10/14	Fri 2/28/14	1248,1231
1253	Unit Test: PowerInsight Explorer - Custom Reports	3 wks	Mon 2/10/14	Fri 2/28/14	1248,1232
1254	Unit Test: PowerInsight Explorer - Rules	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1233
1255	Unit Test: PowerInsight Explorer - Extract Rules in the Cerner Millennium Source Domain	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1234
1256	Unit Test: PowerInsight Explorer - Row-Level Security	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1235
1257	Unit Test: PowerInsight Explorer - Operations Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1236
1258	Unit Test: PowerInsight Explorer - Informatica Data Loads	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1237
1259	Unit Test: PowerInsight Explorer - Initial Extract and Load Processes	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1238
1260	Unit Test: PowerInsight Explorer - Manual Extract and Load Runs	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1239
1261	Unit Test: PowerInsight Explorer - Informatica Model Repository	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1240
1262	Unit Test: PowerInsight Explorer - Servers and Services	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1241
1263	Unit Test: PowerInsight Explorer - Business Objects User Accounts and Groups	3 wks	Mon 2/10/14	Fri 2/28/14	1247,1242
1264	**System Testing**	**8 wks**	**Mon 12/16/13**	**Fri 2/7/14**	
1265	Localize System Test Tracking and Scripts - PowerInsight Explorer	1 wk	Mon 12/16/13	Fri 12/20/13	11
1266	Localize System Test Tracking and Scripts - PowerInsight Enterprise Data Warehouse	1 wk	Mon 12/16/13	Fri 12/20/13	11
1267	First Draft System Test Scripts - PowerInsight Explorer	2 wks	Mon 12/23/13	Fri 1/3/14	1265
1268	First Draft System Test Scripts - PowerInsight Enterprise Data Warehouse	2 wks	Mon 12/23/13	Fri 1/3/14	1266
1269	Final System Test Scripts - PowerInsight Explorer	2 wks	Mon 1/6/14	Fri 1/17/14	1267
1270	Final System Test Scripts - PowerInsight Enterprise Data Warehouse	2 wks	Mon 1/6/14	Fri 1/17/14	1268
1271	Complete System Testing - PowerInsight Explorer	3 wks	Mon 1/20/14	Fri 2/7/14	1269
1272	Complete System Testing - PowerInsight Enterprise Data Warehouse	3 wks	Mon 1/20/14	Fri 2/7/14	1270
1273	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1274	Integration Test Scripts - PowerInsight Explorer	5 wks	Mon 12/16/13	Fri 1/17/14	11
1275	Integration Test Scripts - PowerInsight Enterprise Data Warehouse	5 wks	Mon 12/16/13	Fri 1/17/14	11
1276	Complete Integration Testing - PowerInsight Explorer	5 wks	Mon 1/20/14	Fri 2/21/14	1274
1277	Complete Integration Testing - PowerInsight Enterprise Data Warehouse	5 wks	Mon 1/20/14	Fri 2/21/14	1275

ID	Task Name	Duration	Start	Finish	Predecessors
1278	Milestone: Conclude All Testing - PowerInsight Explorer	0 days	Fri 2/28/14	Fri 2/28/14	1249,1250,1251,1252,
1279	Milestone: Conclude All Testing - PowerInsight Enterprise Data Warehouse	0 days	Fri 2/21/14	Fri 2/21/14	1247,1248,1272,1277
1280	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1281	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1282	Conversion Readiness Assessment - PowerInsight Explorer	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1283	Conversion Readiness Assessment - PowerInsight Enterprise Data Warehouse	6 wks	Mon 2/10/14	Fri 3/21/14	12SS
1284	Review & Update Conversion Cutover Plan (sent by IA) - PowerInsight Explorer	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1285	Review & Update Conversion Cutover Plan (sent by IA) - PowerInsight Enterprise Data Warehouse	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1286	Complete the Turnover Process documentation- PowerInsight Explorer	5 wks	Mon 6/30/14	Fri 8/1/14	18
1287	Complete the Turnover Process documentation- PowerInsight Enterprise Data Warehouse	5 wks	Mon 6/30/14	Fri 8/1/14	18
1288	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1289	Complete Post Conversion Assessment Workbook for PowerInsight Explorer	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1290	Complete Post Conversion Assessment Workbook for PowerInsight Enterprise Data Warehouse	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1291	**REVENUE CYCLE**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
1292	**Cerner CareManagement**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
1293	**DESIGN**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
1294	**Establish Context for Design**	**4 wks**	**Mon 5/20/13**	**Fri 6/14/13**	
1295	Conduct Open House Demo Session - Care Management	1 wk	Mon 5/20/13	Fri 5/24/13	7
1296	Review Demo Video(s) of Care Management	4 wks	Mon 5/20/13	Fri 6/14/13	7
1297	Complete Open House Scripts - Care Management	4 wks	Mon 5/20/13	Fri 6/14/13	7
1298	Onsite Workflow Assessment - Care Management	1 wk	Mon 5/20/13	Fri 5/24/13	7
1299	Functional Demo: Assignment Worklist	10 days	Mon 5/20/13	Fri 5/31/13	7
1300	Functional Demo Utilization Management Worklist	10 days	Mon 5/20/13	Fri 5/31/13	7
1301	Functional Demo Utilization Management Summary Mpage	10 days	Mon 5/20/13	Fri 5/31/13	7
1302	Functional Demo Clinical Review Mpage	10 days	Mon 5/20/13	Fri 5/31/13	7
1303	Functional Demo: Avoidable Days Mpage	10 days	Mon 5/20/13	Fri 5/31/13	7
1304	Functional Demo Readmission Mpage	10 days	Mon 5/20/13	Fri 5/31/13	7
1305	Functional Demo: Denied Days Worklist	10 days	Mon 5/20/13	Fri 5/31/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
1306	Functional Demo: Appeals Worklist	10 days	Mon 5/20/13	Fri 5/31/13	7
1307	Functional Demo Discharge Management Worklist	10 days	Mon 5/20/13	Fri 5/31/13	7
1308	Functional Demo Discharge CM Summary Mpage	10 days	Mon 5/20/13	Fri 5/31/13	7
1309	**Data Collection / BedRock**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
1310	Data Collection Workbook - Revenue Cycle Reporting (Current State section)	4 wks	Mon 12/31/12	Fri 1/25/13	2
1311	Data Collection Workbook - Revenue Cycle Reporting (Future State and Custom Report sections. Client Signoff on each row)	4 wks	Mon 10/7/13	Fri 11/1/13	1310,9
1312	Data Collection Workbook - Care Management	8 wks	Mon 7/15/13	Fri 9/6/13	8
1313	**DDM**	**14 wks**	**Mon 7/15/13**	**Fri 10/18/13**	
1314	DDM Care Management > DDM Workflow Area : 01 - General	14 wks	Mon 7/15/13	Fri 10/18/13	8
1315	**BUILD**	**14 wks**	**Mon 11/4/13**	**Fri 2/7/14**	
1316	Work Package: Care Management	14 wks	Mon 11/4/13	Fri 2/7/14	1312,1314,1311
1317	**TEST**	**62.2 wks**	**Fri 12/21/12**	**Fri 2/28/14**	
1318	**Unit Testing**	**62.2 wks**	**Fri 12/21/12**	**Fri 2/28/14**	
1319	Localize Unit Test Scripts - Care Management	5 wks	Fri 12/21/12	Thu 1/24/13	
1320	Unit Test Scripts - Care Management	3 wks	Fri 1/25/13	Thu 2/14/13	1319
1321	Unit Test: Care Management	15 days	Mon 2/10/14	Fri 2/28/14	1316,1320
1322	**System Testing**	**6 wks**	**Fri 12/21/12**	**Thu 1/31/13**	
1323	Localize System Test Tracking and Scripts - Care Management	1 wk	Fri 12/21/12	Thu 12/27/12	
1324	First Draft System Test Scripts - Care Management	2 wks	Fri 12/28/12	Thu 1/10/13	1323
1325	Final System Test Scripts - Care Management	2 wks	Fri 12/28/12	Thu 1/10/13	1323
1326	Complete System Testing - Care Management	3 wks	Fri 1/11/13	Thu 1/31/13	1325
1327	**Integration Testing**	**10 wks**	**Fri 2/1/13**	**Thu 4/11/13**	
1328	Integration Test Scripts - Care Management	5 wks	Fri 2/1/13	Thu 3/7/13	
1329	Complete Integration Testing - Care Management	5 wks	Fri 3/8/13	Thu 4/11/13	1328
1330	Milestone: Conclude All Testing - Care Management	0 days	Fri 2/28/14	Fri 2/28/14	1321,1326,1329
1331	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1332	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1333	Conversion Readiness Assessment - Care Management	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1334	Review & Update Conversion Cutover Plan (sent by IA) - Care Management	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1335	Complete the Turnover Process documentation- Care Management	5 wks	Mon 6/30/14	Fri 8/1/14	18
1336	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1337	Complete Post Conversion Assessment Workbook for Care Management	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1338	**SOW #6 - Scheduling (Scheduling Management / Medical Necessity / Auto Messaging Service)**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
1339	**Task 1 Conduct SOW Kick-off/ Mobilization**	**26 wks**	**Mon 12/24/12**	**Fri 6/21/13**	
1340	Subtask 1.1 Develop detailed Sub-Project Work Plan - Scheduling	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
1341	Subtask 1.2 Conduct Initiation session for Scheduling Workgroup	3 wks	Mon 6/3/13	Fri 6/21/13	7FS+2 wks
1342	Subtask 1.3 Conduct Comprehension Exercises	3 wks	Mon 6/3/13	Fri 6/21/13	7FS+2 wks
1343	**DESIGN**	**46.2 wks**	**Fri 12/21/12**	**Fri 11/8/13**	
1344	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**24.2 wks**	**Fri 12/21/12**	**Fri 6/7/13**	
1345	Conduct internal Transaction Services Knowledge Transfer	1 wk	Fri 12/21/12	Thu 12/27/12	
1346	Conduct Open House Demo Session - Scheduling	1 wk	Mon 4/29/13	Fri 5/3/13	5
1347	Complete Open House Scripts - Scheduling	4 wks	Fri 4/26/13	Fri 5/24/13	5
1348	Complete Scheduling WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
1349	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 4/29/13	Fri 5/3/13	5
1350	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - Scheduling Management)	1 wk	Mon 5/20/13	Fri 5/24/13	7
1351	Conduct Open House Demo Session - Medical Necessity	1 wk	Mon 4/29/13	Fri 5/3/13	5
1352	Complete Open House Scripts - Medical Necessity	4 wks	Fri 4/26/13	Fri 5/24/13	5
1353	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	2 wks	Mon 5/27/13	Fri 6/7/13	1350
1354	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
1355	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
1356	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	1355
1357	**Task 4 Conduct Design Review**	**22 wks**	**Mon 5/20/13**	**Fri 10/18/13**	
1358	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
1359	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/14/13	Fri 10/18/13	1358
1360	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 5/20/13	Fri 5/24/13	1350SS
1361	Subtask 4.4 Conduct Scheduling Workflow Workshop	1 wk	Mon 5/20/13	Fri 5/24/13	1350SS
1362	Subtask 4.5 Develop Final Detailed Design Document	2 wks	Mon 5/27/13	Fri 6/7/13	1361
1363	**Data Collection**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
1364	Data Collection Workbook - Revenue Cycle Reporting (Current State section)	4 wks	Mon 12/31/12	Fri 1/25/13	2

ID	Task Name	Duration	Start	Finish	Predecessors
1365	Data Collection Workbook - Revenue Cycle Reporting (Future State and Custom Report sections. Client Signoff on each row)	4 wks	Mon 10/7/13	Fri 11/1/13	9,1364
1366	Data Collection Workbook - Project Start Up - Scheduling	8 wks	Mon 12/31/12	Fri 2/22/13	2
1367	Data Collection Workbook - Scheduling Management > Bookshelf	8 wks	Mon 7/15/13	Fri 9/6/13	8
1368	Data Collection Workbook - Scheduling Management > Slot Types	8 wks	Mon 7/15/13	Fri 9/6/13	8
1369	Data Collection Workbook - Scheduling Management > Default Schedule Templates	8 wks	Mon 7/15/13	Fri 9/6/13	8
1370	Data Collection Workbook - Scheduling Management > Accept Formats	8 wks	Mon 7/15/13	Fri 9/6/13	8
1371	Data Collection Workbook - Scheduling Management > Scheduling Guidelines	8 wks	Mon 7/15/13	Fri 9/6/13	8
1372	Data Collection Workbook - Scheduling Management > Person Preparations or Posts	8 wks	Mon 7/15/13	Fri 9/6/13	8
1373	Data Collection Workbook - Scheduling Management > Appointment Types and Resources	8 wks	Mon 7/15/13	Fri 9/6/13	8
1374	Data Collection Workbook - Scheduling Management > Protocols	8 wks	Mon 7/15/13	Fri 9/6/13	8
1375	Data Collection Workbook - Scheduling Management > Groups for Interactions	8 wks	Mon 7/15/13	Fri 9/6/13	8
1376	Data Collection Workbook - Scheduling Management > Interactions	8 wks	Mon 7/15/13	Fri 9/6/13	8
1377	Data Collection Workbook - Scheduling Management > Maintenance Reasons	8 wks	Mon 7/15/13	Fri 9/6/13	8
1378	Data Collection Workbook - Scheduling Management > Orders	8 wks	Mon 7/15/13	Fri 9/6/13	8
1379	Data Collection Workbook - Scheduling Management > Scheduling Security	8 wks	Mon 7/15/13	Fri 9/6/13	8
1380	Data Collection Workbook - Scheduling Management > Standard Reports	8 wks	Mon 7/15/13	Fri 9/6/13	8
1381	DDM > Scheduling > Workflow Area : 05 - SM: Medical Necessity	14 wks	Mon 7/15/13	Fri 10/18/13	8
1382	Data Collection Workbook - Eligibility Management - Refer to Top 20 Payer Data Collection	4 wks	Mon 7/15/13	Fri 8/9/13	8
1383	**Task 5 Complete Partial System Build (BUILD)**	**26 wks**	**Mon 8/12/13**	**Fri 2/7/14**	
1384	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 9/9/13	Fri 12/13/13	1367
1385	Work Package: Scheduling - Bookshelf	14 wks	Mon 9/9/13	Fri 12/13/13	1367
1386	Work Package: Scheduling - Slot Types	14 wks	Mon 9/9/13	Fri 12/13/13	1368
1387	Work Package: Scheduling - Default Schedule - Templates	14 wks	Mon 9/9/13	Fri 12/13/13	1369
1388	Work Package: Scheduling - Accept Formats	14 wks	Mon 9/9/13	Fri 12/13/13	1370

ID	Task Name	Duration	Start	Finish	Predecessors
1389	Work Package: Scheduling - Scheduling Guidelines	14 wks	Mon 9/9/13	Fri 12/13/13	1371
1390	Work Package: Scheduling - Person Preparations or Posts	14 wks	Mon 9/9/13	Fri 12/13/13	1372
1391	Work Package: Scheduling - Appointment Types Resources and Settings	14 wks	Mon 9/9/13	Fri 12/13/13	1373
1392	Work Package: Scheduling - Protocols	14 wks	Mon 9/9/13	Fri 12/13/13	1374
1393	Work Package: Scheduling - Groups for Interactions	14 wks	Mon 9/9/13	Fri 12/13/13	1375
1394	Work Package: Scheduling - Interactions	14 wks	Mon 9/9/13	Fri 12/13/13	1376
1395	Work Package: Scheduling - Maintenance Reasons	14 wks	Mon 9/9/13	Fri 12/13/13	1377
1396	Work Package: Scheduling - Orders	14 wks	Mon 9/9/13	Fri 12/13/13	1378
1397	Work Package: Scheduling - Security	14 wks	Mon 9/9/13	Fri 12/13/13	1379
1398	Work Package: Scheduling - Reports	14 wks	Mon 11/4/13	Fri 2/7/14	1380,1365
1399	Work Package: Scheduling - Medical Necessity	14 wks	Mon 10/21/13	Fri 1/24/14	1381
1400	Work Package: Scheduling - Automated Messaging Service	14 wks	Mon 8/12/13	Fri 11/15/13	1382
1401	Subtask 5.2 Complete Initial Partial Build	1 day	Mon 11/18/13	Mon 11/18/13	1400
1402	**Task 6 Conduct System Validation**	**13 wks**	**Mon 12/16/13**	**Fri 3/14/14**	
1403	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
1404	Subtask 6.2 Conduct System Validation Session Follow-up	3 mons	Mon 12/23/13	Fri 3/14/14	1403
1405	**Task 7 Complete Build of Scheduling and Conduct Unit and System Testing (TEST)**	**14.2 wks**	**Tue 11/19/13**	**Tue 2/25/14**	
1406	Subtask 7.1 Complete System Build	1 day	Tue 11/19/13	Tue 11/19/13	1401
1407	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	3.5 mons	Wed 11/20/13	Tue 2/25/14	1406
1408	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
1409	QC Test: Scheduling - Bookshelf	3 wks	Mon 12/16/13	Fri 1/3/14	1385
1410	QC Test: Scheduling - Slot Types	3 wks	Mon 12/16/13	Fri 1/3/14	1386
1411	QC Test: Scheduling - Default Schedule - Templates	3 wks	Mon 12/16/13	Fri 1/3/14	1387
1412	QC Test: Scheduling - Accept Formats	3 wks	Mon 12/16/13	Fri 1/3/14	1388
1413	QC Test: Scheduling - Scheduling Guidelines	3 wks	Mon 12/16/13	Fri 1/3/14	1389
1414	QC Test: Scheduling - Person Preparations or Posts	3 wks	Mon 12/16/13	Fri 1/3/14	1390
1415	QC Test: Scheduling - Appointment Types Resources and Settings	3 wks	Mon 12/16/13	Fri 1/3/14	1391
1416	QC Test: Scheduling - Protocols	3 wks	Mon 12/16/13	Fri 1/3/14	1392
1417	QC Test: Scheduling - Groups for Interactions	3 wks	Mon 12/16/13	Fri 1/3/14	1393
1418	QC Test: Scheduling - Interactions	3 wks	Mon 12/16/13	Fri 1/3/14	1394
1419	QC Test: Scheduling - Maintenance Reasons	3 wks	Mon 12/16/13	Fri 1/3/14	1395

ID	Task Name	Duration	Start	Finish	Predecessors
1420	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1421	Localize Unit Test Scripts - Scheduling	5 wks	Mon 12/16/13	Fri 1/17/14	11
1422	Localize Unit Test Scripts - Medical Necessity	5 wks	Mon 12/16/13	Fri 1/17/14	11
1423	Localize Unit Test Scripts - Automated Messaging Service	5 wks	Mon 12/16/13	Fri 1/17/14	11
1424	Unit Test Scripts - Scheduling	3 wks	Mon 1/20/14	Fri 2/7/14	1421
1425	Unit Test Scripts - Medical Necessity	3 wks	Mon 1/20/14	Fri 2/7/14	1422
1426	Unit Test Scripts - Automated Messaging Service	3 wks	Mon 1/20/14	Fri 2/7/14	1423
1427	Unit Test: Scheduling - Bookshelf	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1385,1409
1428	Unit Test: Scheduling - Slot Types	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1386,1410
1429	Unit Test: Scheduling - Default Schedule - Templates	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1387,1411
1430	Unit Test: Scheduling - Accept Formats	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1388,1412
1431	Unit Test: Scheduling - Scheduling Guidelines	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1389,1413
1432	Unit Test: Scheduling - Person Preparations or Posts	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1390,1414
1433	Unit Test: Scheduling - Appointment Types Resources and Settings	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1391,1415
1434	Unit Test: Scheduling - Protocols	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1392,1416
1435	Unit Test: Scheduling - Groups for Interactions	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1393,1417
1436	Unit Test: Scheduling - Interactions	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1394,1418
1437	Unit Test: Scheduling - Maintenance Reasons	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1395,1419
1438	Unit Test: Scheduling - Orders	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1396
1439	Unit Test: Scheduling - Security	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1397
1440	Unit Test: Scheduling - Reports	3 wks	Mon 2/10/14	Fri 2/28/14	1424,1398
1441	Unit Test: Scheduling - Medical Necessity	3 wks	Mon 2/10/14	Fri 2/28/14	1399,1425
1442	Unit Test: Scheduling - Automated Messaging Service	3 wks	Mon 2/10/14	Fri 2/28/14	1400,1426
1443	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
1444	Localize System Test Tracking and Scripts - Scheduling	1 wk	Mon 12/16/13	Fri 12/20/13	11
1445	First Draft System Test Scripts - Scheduling	2 wks	Mon 12/23/13	Fri 1/3/14	1444
1446	Final System Test Scripts - Scheduling	2 wks	Mon 12/23/13	Fri 1/3/14	1444
1447	Complete System Testing - Scheduling	3 wks	Mon 1/6/14	Fri 1/24/14	1446
1448	Localize System Test Tracking and Scripts - Medical Necessity	1 wk	Mon 12/16/13	Fri 12/20/13	11
1449	First Draft System Test Scripts - Medical Necessity	2 wks	Mon 12/23/13	Fri 1/3/14	1448
1450	Final System Test Scripts - Medical Necessity	2 wks	Mon 12/23/13	Fri 1/3/14	1448
1451	Complete System Testing - Medical Necessity	3 wks	Mon 1/6/14	Fri 1/24/14	1450
1452	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1453	Integration Test Scripts - Scheduling	5 wks	Mon 12/16/13	Fri 1/17/14	11
1454	Complete Integration Testing - Scheduling	5 wks	Mon 1/20/14	Fri 2/21/14	1453
1455	Integration Test Scripts - Medical Necessity	5 wks	Mon 12/16/13	Fri 1/17/14	11
1456	Complete Integration Testing - Medical Necessity	5 wks	Mon 1/20/14	Fri 2/21/14	1455
1457	Milestone: Conclude All Testing - Scheduling	0 days	Fri 2/28/14	Fri 2/28/14	1427,1428,1429,1430,
1458	Milestone: Conclude All Testing - Medical Necessity	0 days	Fri 2/28/14	Fri 2/28/14	1441,1451,1456
1459	Milestone: Conclude All Testing - AutoMsgSrv	0 days	Fri 2/28/14	Fri 2/28/14	1442
1460	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	1442FS-1 day
1461	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1462	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1463	Conversion Readiness Assessment - Scheduling	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1464	Review & Update Conversion Cutover Plan (sent by IA) - Scheduling	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1465	Complete the Turnover Process documentation- Scheduling	5 wks	Mon 6/30/14	Fri 8/1/14	18
1466	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1467	Complete Post Conversion Assessment Workbook for Scheduling	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1468	**Registration Management / Eligibility Management & Benefit Services**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
1469	**DESIGN**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
1470	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
1471	Conduct internal Transaction Services Knowledge Transfer	1 wk	Mon 4/29/13	Fri 5/3/13	5
1472	Conduct Open House Demo Session - Registration	1 wk	Mon 4/29/13	Fri 5/3/13	5
1473	Complete Registration WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
1474	Complete Open House Scripts - Registration	4 wks	Fri 4/26/13	Fri 5/24/13	5
1475	Onsite Workflow Assessment - Registration Management	1 wk	Mon 5/20/13	Fri 5/24/13	7
1476	Onsite Workflow Assessment - Eligibility Management	1 wk	Mon 5/20/13	Fri 5/24/13	7
1477	**Data Collection**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	
1478	Data Collection Workbook - Revenue Cycle Reporting (Current State section)	4 wks	Mon 12/31/12	Fri 1/25/13	2
1479	Data Collection Workbook - Revenue Cycle Reporting (Future State and Custom Report sections. Client Signoff on each row)	4 wks	Mon 10/7/13	Fri 11/1/13	9,1478
1480	Data Collection Workbook - Project Start Up - Registration Management	8 wks	Mon 12/31/12	Fri 2/22/13	2
1481	Data Collection Workbook - Registration Management Code Sets > Standard Code Sets tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1482	Data Collection Workbook - Registration Management Code Sets > Code Value Grouping tab	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
1483	Data Collection Workbook - Registration Management Code Sets > Facility Filtering tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1484	Data Collection Workbook - Registration Management Conversations > Client Decisions tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1485	Data Collection Workbook - Registration Management Conversations > Conversations tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1486	Data Collection Workbook - Core Encounter Class Type Linking and Auto Discharge	8 wks	Mon 7/15/13	Fri 9/6/13	8
1487	Data Collection Workbook - Registration Management Design Workbook > Auto Discharge tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1488	Data Collection Workbook - Registration Management Design Workbook > Patient locator tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1489	Data Collection Workbook - Registration Management Design Workbook > Worklists tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1490	Data Collection Workbook - Registration Management Codes Sets > code set 291 on Code Sets tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1491	Data Collection Workbook - Registration Management Conversations > Rules tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1492	Data Collection Workbook - Eligibility Management	4 wks	Mon 7/15/13	Fri 8/9/13	8
1493	**BUILD**	**30 wks**	**Mon 7/15/13**	**Fri 2/7/14**	
1494	Work Package: Registration - Code Sets	14 wks	Mon 9/9/13	Fri 12/13/13	1481
1495	Work Package: Registration - Code Value Grouping	14 wks	Mon 9/9/13	Fri 12/13/13	1482
1496	Work Package: Registration - Facility Filtering	14 wks	Mon 9/9/13	Fri 12/13/13	1483
1497	Work Package: Registration - Conversation Properties	14 wks	Mon 9/9/13	Fri 12/13/13	1484
1498	Work Package: Registration - Conversations	14 wks	Mon 9/9/13	Fri 12/13/13	1485
1499	Work Package: Registration - Encounter Type Linking	14 wks	Mon 9/9/13	Fri 12/13/13	1486
1500	Work Package: Registration - Auto Discharge	14 wks	Mon 9/9/13	Fri 12/13/13	1487
1501	Work Package: Registration - Patient Locator	14 wks	Mon 9/9/13	Fri 12/13/13	1488
1502	Work Package: Registration - Worklists	14 wks	Mon 9/9/13	Fri 12/13/13	1489
1503	Work Package: Registration - Bed Status	14 wks	Mon 9/9/13	Fri 12/13/13	1490
1504	Work Package: Registration - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	1491
1505	Work Package: Registration - Reports	14 wks	Mon 11/4/13	Fri 2/7/14	1491,1479
1506	Work Package: Registration - Initial Set Up	14 wks	Mon 9/9/13	Fri 12/13/13	1491
1507	Work Package: Registration - Documents	14 wks	Mon 9/9/13	Fri 12/13/13	1491

ID	Task Name	Duration	Start	Finish	Predecessors
1508	Work Package: Registration - Privacy Practice Manager	14 wks	Mon 9/9/13	Fri 12/13/13	1491
1509	Work Package: Eligibility - Connectivity	14 wks	Mon 7/15/13	Fri 10/18/13	8
1510	Work Package: Eligibility - Payer HIMs	14 wks	Mon 8/12/13	Fri 11/15/13	1492
1511	Work Package: Eligibility - Batch Functionality	14 wks	Mon 7/15/13	Fri 10/18/13	8
1512	Work Package: Eligibility - Purge Jobs	14 wks	Mon 7/15/13	Fri 10/18/13	8
1513	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1514	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
1515	QC Test: Registration - Code Sets	3 wks	Mon 12/16/13	Fri 1/3/14	1494
1516	QC Test: Registration - Code Value Grouping	3 wks	Mon 12/16/13	Fri 1/3/14	1495
1517	QC Test: Registration - Facility Filtering	3 wks	Mon 12/16/13	Fri 1/3/14	1496
1518	QC Test: Registration - Conversation Properties	3 wks	Mon 12/16/13	Fri 1/3/14	1497
1519	QC Test: Registration - Conversations	3 wks	Mon 12/16/13	Fri 1/3/14	1498
1520	QC Test: Registration - Encounter Type Linking	3 wks	Mon 12/16/13	Fri 1/3/14	1499
1521	QC Test: Registration - Auto Discharge	3 wks	Mon 12/16/13	Fri 1/3/14	1500
1522	QC Test: Registration - Patient Locator	3 wks	Mon 12/16/13	Fri 1/3/14	1501
1523	QC Test: Registration - Worklists	3 wks	Mon 12/16/13	Fri 1/3/14	1502
1524	QC Test: Registration - Bed Status	3 wks	Mon 12/16/13	Fri 1/3/14	1503
1525	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1526	Localize Unit Test Scripts - Registration	5 wks	Mon 12/16/13	Fri 1/17/14	11
1527	Unit Test Scripts - Registration	3 wks	Mon 1/20/14	Fri 2/7/14	1526
1528	Localize Unit Test Scripts - Eligibility	5 wks	Mon 12/16/13	Fri 1/17/14	11
1529	Unit Test Scripts - Eligibility	3 wks	Mon 1/20/14	Fri 2/7/14	1528
1530	Unit Test: Registration - Code Sets	3 wks	Mon 2/10/14	Fri 2/28/14	1494,1527,1515
1531	Unit Test: Registration - Code Value Grouping	3 wks	Mon 2/10/14	Fri 2/28/14	1495,1527,1516
1532	Unit Test: Registration - Facility Filtering	3 wks	Mon 2/10/14	Fri 2/28/14	1496,1527,1517
1533	Unit Test: Registration - Conversation Properties	3 wks	Mon 2/10/14	Fri 2/28/14	1497,1527,1518
1534	Unit Test: Registration - Conversations	3 wks	Mon 2/10/14	Fri 2/28/14	1498,1527,1519
1535	Unit Test: Registration - Encounter Type Linking	3 wks	Mon 2/10/14	Fri 2/28/14	1499,1527,1520
1536	Unit Test: Registration - Auto Discharge	3 wks	Mon 2/10/14	Fri 2/28/14	1500,1527,1521
1537	Unit Test: Registration - Patient Locator	3 wks	Mon 2/10/14	Fri 2/28/14	1501,1527,1522
1538	Unit Test: Registration - Worklists	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1502,1523
1539	Unit Test: Registration - Bed Status	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1503,1524
1540	Unit Test: Registration - Rules	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1504

ID	Task Name	Duration	Start	Finish	Predecessors
1541	Unit Test: Registration - Reports	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1505
1542	Unit Test: Registration - Initial Set Up	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1506
1543	Unit Test: Registration - Documents	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1507
1544	Unit Test: Registration - Privacy Practice Manager	3 wks	Mon 2/10/14	Fri 2/28/14	1527,1508
1545	Unit Test: Eligibility - Connectivity	3 wks	Mon 2/10/14	Fri 2/28/14	1509,1529
1546	Unit Test: Eligibility - Payer HIMs	3 wks	Mon 2/10/14	Fri 2/28/14	1510,1529
1547	Unit Test: Eligibility - Batch Functionality	3 wks	Mon 2/10/14	Fri 2/28/14	1511,1529
1548	Unit Test: Eligibility - Purge Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	1512,1529
1549	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
1550	Localize System Test Tracking and Scripts - Registration	1 wk	Mon 12/16/13	Fri 12/20/13	11
1551	First Draft System Test Scripts - Registration	2 wks	Mon 12/23/13	Fri 1/3/14	1550
1552	Final System Test Scripts - Registration	2 wks	Mon 12/23/13	Fri 1/3/14	1550
1553	Complete System Testing - Registration	3 wks	Mon 1/6/14	Fri 1/24/14	1552
1554	Localize System Test Tracking and Scripts - Eligibility	1 wk	Mon 12/16/13	Fri 12/20/13	11
1555	First Draft System Test Scripts - Eligibility	2 wks	Mon 12/23/13	Fri 1/3/14	1554
1556	Final System Test Scripts - Eligibility	2 wks	Mon 12/23/13	Fri 1/3/14	1554
1557	Complete System Testing - Eligibility	3 wks	Mon 1/6/14	Fri 1/24/14	1556
1558	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1559	Integration Test Scripts - Registration	5 wks	Mon 12/16/13	Fri 1/17/14	11
1560	Complete Integration Testing - Registration	5 wks	Mon 1/20/14	Fri 2/21/14	1559
1561	Integration Test Scripts - Eligibility	5 wks	Mon 12/16/13	Fri 1/17/14	11
1562	Complete Integration Testing - Eligibility	5 wks	Mon 1/20/14	Fri 2/21/14	1561
1563	Milestone: Conclude All Testing - Registration	0 days	Fri 2/28/14	Fri 2/28/14	1538,1539,1540,1541,
1564	Milestone: Conclude All Testing - Eligibility	0 days	Fri 2/28/14	Fri 2/28/14	1545,1546,1547,1548,
1565	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1566	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1567	Conversion Readiness Assessment - Registration	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1568	Review & Update Conversion Cutover Plan (sent by IA) - Registration	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1569	Complete the Turnover Process documentation- Registration	5 wks	Mon 6/30/14	Fri 8/1/14	18
1570	Conversion Readiness Assessment - Eligibility	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1571	Review & Update Conversion Cutover Plan (sent by IA) - Eligibility	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1572	Complete the Turnover Process documentation- Eligibility	5 wks	Mon 6/30/14	Fri 8/1/14	18
1573	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1574	Complete Post Conversion Assessment Workbook for Registration	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1575	Complete Post Conversion Assessment Workbook for Eligibility	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1576	**SOW #16 - Medical Records (Health Information Management (HIM) / Transcription)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
1577	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
1578	Subtask 1.1 Develop detailed Sub-Project Work Plan - Medical Records	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
1579	Subtask 1.2 Conduct Initiation session for Medical Records Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
1580	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
1581	**DESIGN**	**47 wks**	**Mon 12/31/12**	**Fri 11/22/13**	
1582	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**9 wks**	**Fri 4/26/13**	**Fri 6/28/13**	
1583	Conduct Open House Demo Session - HIM	1 wk	Mon 4/29/13	Fri 5/3/13	5
1584	Complete Open House Scripts - HIM	4 wks	Fri 4/26/13	Fri 5/24/13	5
1585	Complete Open House Scripts - Transcription	4 wks	Fri 4/26/13	Fri 5/24/13	5
1586	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
1587	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - HIM)	1 wk	Mon 5/20/13	Fri 5/24/13	7
1588	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/24/13	Fri 6/28/13	1587FS+4 wks
1589	Onsite Workflow Assessment - Transcription	1 wk	Mon 5/20/13	Fri 5/24/13	7
1590	Complete HIM WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
1591	Complete HIM and HIM with Transcription WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
1592	**Task 3 Conduct System Review**	**13 wks**	**Mon 7/8/13**	**Fri 10/4/13**	
1593	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/8/13	Fri 7/12/13	8SS
1594	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	3 mons	Mon 7/15/13	Fri 10/4/13	1593
1595	**Task 4 Conduct Design Review**	**8 wks**	**Mon 9/30/13**	**Fri 11/22/13**	
1596	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
1597	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/21/13	Fri 10/25/13	1596FS+2 wks
1598	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/21/13	Fri 10/25/13	1596FS+2 wks
1599	Subtask 4.4 Conduct Medical Records Workflow Workshop	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
1600	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/18/13	Fri 11/22/13	1598FS+3 wks
1601	**Data Collection**	**44 wks**	**Mon 12/31/12**	**Fri 11/1/13**	

ID	Task Name	Duration	Start	Finish	Predecessors
1602	Data Collection Workbook - Revenue Cycle Reporting (Current State section)	4 wks	Mon 12/31/12	Fri 1/25/13	2
1603	Data Collection Workbook - Revenue Cycle Reporting (Future State and Custom Report sections)	4 wks	Mon 10/7/13	Fri 11/1/13	1602,9
1604	Data Collection Workbook - Cerner HIM Release of Information (System Parameters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1605	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (System Parameters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1606	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (System Parameters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1607	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (System Parameters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1608	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Coding Params-HIM Chart Coding tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1609	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Cerner Encoder_Grouper tab, Cerner Encoder_Grouper RevCodes tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1610	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (3M Encoder Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1611	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Deficiency Document Types tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1612	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Chart Tracking Locations tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1613	Data Collection Workbook - Cerner HIM Release of Information (Code Sets tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1614	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Code Sets tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1615	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Code Sets tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1616	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Code Sets tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1617	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Media Type-Org Relationships tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1618	Data Collection Workbook - Cerner HIM Release of Information (ROI Letters tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
1619	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Deficiency Letters tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1620	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management Letters Preferences (Deficiency Letters Preferences tab	5 wks	Mon 7/15/13	Fri 8/16/13	8
1621	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Abstract Form tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1622	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Task Queue Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1623	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Task Queue Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1624	Data Collection Workbook - Cerner HIM Release of Information (Requester Source Default tab, ROI Requesters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1625	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Task on Hold Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1626	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Media Type Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1627	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (PIR Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1628	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Allocation Date Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1629	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Anticipated Document Rules tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1630	Data Collection Workbook - Cerner HIM Release of Information (Reports tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1631	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Operations Jobs tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1632	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Reports tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1633	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Tracking Labels tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1634	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Operations Jobs tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1635	Data Collection Workbook - Cerner HIM Chart Tracking and Patient Information Request (Reports tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
1636	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Operations Jobs tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1637	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Reports tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1638	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Signature Lines tab)	5 wks	Mon 7/15/13	Fri 8/16/13	8
1639	Data Collection Workbook - Cerner HIM Chart Completion and Deficiency Management (Third Party Transcription tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1640	Data Collection Workbook - Cerner HIM Chart Coding and Chart Abstracting (Coding Query Form tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
1641	Data Collection Workbook - Medical Transcription Management > Note Types / Templates	5 wks	Mon 7/15/13	Fri 8/16/13	8
1642	Data Collection Workbook - Medical Transcription Management > Signature Lines	5 wks	Mon 7/15/13	Fri 8/16/13	8
1643	Data Collection Workbook - Medical Transcription Management > Discern Analytics	5 wks	Mon 7/15/13	Fri 8/16/13	8
1644	Data Collection > Transcription DTAs	5 wks	Mon 7/15/13	Fri 8/16/13	8
1645	**Task 5 Complete Partial System Build (BUILD)**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
1646	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 9/9/13	Fri 12/13/13	1608
1647	Work Package: HIM - System Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	1604,1605,1606,1607
1648	Work Package: HIM - Coding Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	1608
1649	Work Package: HIM - Encoder/Grouper	14 wks	Mon 9/9/13	Fri 12/13/13	1609
1650	Work Package: HIM - Grouper Rules	14 wks	Mon 9/9/13	Fri 12/13/13	1610
1651	Work Package: HIM - Event Codes and Event Sets	14 wks	Mon 9/9/13	Fri 12/13/13	1611
1652	Work Package: HIM - Event Extensions	14 wks	Mon 9/9/13	Fri 12/13/13	1611
1653	Work Package: HIM - Locations	14 wks	Mon 9/9/13	Fri 12/13/13	1612
1654	Work Package: HIM - Location Extensions	14 wks	Mon 9/9/13	Fri 12/13/13	1612
1655	Work Package: HIM - Code Sets	14 wks	Mon 9/9/13	Fri 12/13/13	1613,1614,1615,1616
1656	Work Package: HIM - Media Alias Pool	14 wks	Mon 8/19/13	Fri 11/22/13	1617
1657	Work Package: HIM - Org Media Types	14 wks	Mon 8/19/13	Fri 11/22/13	1617,1620
1658	Work Package: HIM - Letters	14 wks	Mon 8/19/13	Fri 11/22/13	1618,1619
1659	Work Package: HIM - Abstract Fields	14 wks	Mon 8/19/13	Fri 11/22/13	1621
1660	Work Package: HIM - Abstract Forms	14 wks	Mon 8/19/13	Fri 11/22/13	1621

ID	Task Name	Duration	Start	Finish	Predecessors
1661	Work Package: HIM - Task Queues	14 wks	Mon 9/9/13	Fri 12/13/13	1622,1623
1662	Work Package: HIM - Requesters	14 wks	Mon 9/9/13	Fri 12/13/13	1624
1663	Work Package: HIM - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	1622,1625,1626,1627,
1664	Work Package: HIM - Reports	14 wks	Mon 9/9/13	Fri 12/13/13	1631,1634,1630,1632,
1665	Work Package: HIM - Transcription/Signature Lines	14 wks	Mon 9/9/13	Fri 12/13/13	1638,1639,1640
1666	Work Package: Transcription - Note Types / Templates	14 wks	Mon 8/19/13	Fri 11/22/13	1641
1667	Work Package: Transcription - Signature Lines	14 wks	Mon 8/19/13	Fri 11/22/13	1642
1668	Work Package: Transcription - DTAs	14 wks	Mon 8/19/13	Fri 11/22/13	1643
1669	Work Package: Transcription - Discern Analytics	14 wks	Mon 8/19/13	Fri 11/22/13	1644
1670	Work Package: Transcription - User Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
1671	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	1665
1672	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/9/13**	**Fri 1/10/14**	
1673	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/9/13	Fri 12/13/13	11SS
1674	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/16/13	Fri 1/10/14	1673
1675	**Task 7 Complete Build of Medical Records and Conduct Unit and System Testing (TEST)**	**56.2 wks**	**Fri 2/1/13**	**Fri 2/28/14**	
1676	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	1671
1677	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	1676
1678	**Quality Center Testing**	**6 wks**	**Mon 11/25/13**	**Fri 1/3/14**	
1679	QC Test: HIM - System Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	1647
1680	QC Test: HIM - Coding Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	1648
1681	QC Test: HIM - Grouper Rules	3 wks	Mon 12/16/13	Fri 1/3/14	1650
1682	QC Test: HIM - Event Codes and Event Sets	3 wks	Mon 12/16/13	Fri 1/3/14	1651
1683	QC Test: HIM - Event Extensions	3 wks	Mon 12/16/13	Fri 1/3/14	1652
1684	QC Test: HIM - Locations	3 wks	Mon 12/16/13	Fri 1/3/14	1653
1685	QC Test: HIM - Location Extensions	3 wks	Mon 12/16/13	Fri 1/3/14	1654
1686	QC Test: HIM - Code Sets	3 wks	Mon 12/16/13	Fri 1/3/14	1655
1687	QC Test: HIM - Media Alias Pool	3 wks	Mon 11/25/13	Fri 12/13/13	1656
1688	QC Test: HIM - Org Media Types	3 wks	Mon 11/25/13	Fri 12/13/13	1657
1689	QC Test: HIM - Letters	3 wks	Mon 11/25/13	Fri 12/13/13	1658
1690	QC Test: HIM - Abstract Fields	3 wks	Mon 11/25/13	Fri 12/13/13	1659
1691	QC Test: HIM - Abstract Forms	3 wks	Mon 11/25/13	Fri 12/13/13	1660

ID	Task Name	Duration	Start	Finish	Predecessors
1692	QC Test: HIM - Task Queues	3 wks	Mon 12/16/13	Fri 1/3/14	1661
1693	QC Test: HIM - Requesters	3 wks	Mon 12/16/13	Fri 1/3/14	1662
1694	QC Test: HIM - Rules	3 wks	Mon 12/16/13	Fri 1/3/14	1663
1695	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1696	Localize Unit Test Scripts - HIM	5 wks	Mon 12/16/13	Fri 1/17/14	11
1697	Localize Unit Test Scripts - Transcription	5 wks	Mon 12/16/13	Fri 1/17/14	11
1698	Unit Test Scripts - HIM	3 wks	Mon 1/20/14	Fri 2/7/14	1696
1699	Unit Test Scripts - Transcription	3 wks	Mon 1/20/14	Fri 2/7/14	1697
1700	Unit Test: HIM - System Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1647,1679
1701	Unit Test: HIM - Coding Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1648,1680
1702	Unit Test: HIM - OptumInsight Encoder	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1649
1703	Unit Test: HIM - Grouper Rules	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1650,1681
1704	Unit Test: HIM - Event Codes and Event Sets	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1651,1682
1705	Unit Test: HIM - Event Extensions	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1652,1683
1706	Unit Test: HIM - Locations	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1653,1684
1707	Unit Test: HIM - Location Extensions	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1654,1685
1708	Unit Test: HIM - Code Sets	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1655,1686
1709	Unit Test: HIM - Media Alias Pool	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1656,1687
1710	Unit Test: HIM - Org Media Types	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1657,1688
1711	Unit Test: HIM - Letters	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1658,1689
1712	Unit Test: HIM - Abstract Fields	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1659,1690
1713	Unit Test: HIM - Abstract Forms	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1660,1691
1714	Unit Test: HIM - Task Queues	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1661,1692
1715	Unit Test: HIM - Requesters	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1662,1693
1716	Unit Test: HIM - Rules	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1663,1694
1717	Unit Test: HIM - Reports	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1664
1718	Unit Test: HIM - Transcription/Signature Lines	3 wks	Mon 2/10/14	Fri 2/28/14	1698,1665
1719	Unit Test: Transcription - Note Types / Templates	3 wks	Mon 2/10/14	Fri 2/28/14	1666,1699
1720	Unit Test: Transcription - Signature Lines	3 wks	Mon 2/10/14	Fri 2/28/14	1667,1699
1721	Unit Test: Transcription - DTAs	3 wks	Mon 2/10/14	Fri 2/28/14	1668,1699
1722	Unit Test: Transcription - Discern Analytics	3 wks	Mon 2/10/14	Fri 2/28/14	1669,1699
1723	Unit Test: Transcription - User Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	1670,1699
1724	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1725	Localize System Test Tracking and Scripts - HIM	1 wk	Mon 12/16/13	Fri 12/20/13	11
1726	First Draft System Test Scripts - HIM	2 wks	Mon 12/23/13	Fri 1/3/14	1725
1727	Final System Test Scripts - HIM	2 wks	Mon 12/23/13	Fri 1/3/14	1725
1728	Complete System Testing - HIM	3 wks	Mon 1/6/14	Fri 1/24/14	1727
1729	Localize System Test Tracking and Scripts - Transcription	1 wk	Mon 12/16/13	Fri 12/20/13	11
1730	First Draft System Test Scripts - Transcription	2 wks	Mon 12/23/13	Fri 1/3/14	1729
1731	Final System Test Scripts - Transcription	2 wks	Mon 12/23/13	Fri 1/3/14	1729
1732	Complete System Testing - Transcription	3 wks	Mon 1/6/14	Fri 1/24/14	1731
1733	**Integration Testing**	**55.2 wks**	**Fri 2/1/13**	**Fri 2/21/14**	
1734	Integration Test Scripts - HIM	5 wks	Mon 12/16/13	Fri 1/17/14	11
1735	Complete Integration Testing - HIM	5 wks	Mon 1/20/14	Fri 2/21/14	1734
1736	Integration Test Scripts - Transcription	5 wks	Fri 2/1/13	Thu 3/7/13	
1737	Complete Integration Testing - Transcription	5 wks	Fri 3/8/13	Thu 4/11/13	1736
1738	Milestone: Conclude All Testing - HIM	0 days	Fri 2/28/14	Fri 2/28/14	1709,1710,1711,1712,
1739	Milestone: Conclude All Testing - Transcription	0 days	Fri 2/28/14	Fri 2/28/14	1719,1720,1721,1722,
1740	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	1739FS-1 day
1741	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1742	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1743	Conversion Readiness Assessment - HIM	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1744	Review & Update Conversion Cutover Plan (sent by IA) - HIM	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1745	Complete the Turnover Process documentation- HIM	5 wks	Mon 6/30/14	Fri 8/1/14	18
1746	Conversion Readiness Assessment - Transcription	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1747	Review & Update Conversion Cutover Plan (sent by IA) - Transcription	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1748	Complete the Turnover Process documentation- Transcription	5 wks	Mon 6/30/14	Fri 8/1/14	18
1749	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1750	Complete Post Conversion Assessment Workbook for HIM	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1751	Complete Post Conversion Assessment Workbook for Transcription	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1752	**Materials Management (Supply Chain)**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
1753	**DESIGN**	**45 wks**	**Mon 12/31/12**	**Fri 11/8/13**	
1754	**Establish Context for Design**	**29 wks**	**Mon 4/22/13**	**Fri 11/8/13**	
1755	Onsite Workflow Assessment - Supply Chain	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
1756	Complete Supply Chain WBT	1 day	Mon 4/22/13	Mon 4/22/13	5SS
1757	Clean Item Master	25 wks	Mon 5/20/13	Fri 11/8/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
1758	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
1759	Data Collection Workbook - Project Start Up - Supply Chain	8 wks	Mon 12/31/12	Fri 2/22/13	2
1760	Data Collection Workbook - Supply Chain - Cost Center - Sub Account tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1761	Data Collection Workbook - Supply Chain - Chart of Account tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1762	Data Collection Workbook - Supply Chain - Inventory Location & Locator tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1763	Data Collection Workbook - Supply Chain - Req Routing tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1764	Data Collection Workbook - Supply Chain - Item Class tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1765	Data Collection Workbook - Supply Chain - Profile tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1766	Data Collection Workbook - Supply Chain - Vendors tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1767	Data Collection Workbook - Supply Chain - Manuf tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1768	Data Collection Workbook - Supply Chain - UOM tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1769	Data Collection Workbook - Supply Chain - Item List tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1770	Data Collection Workbook - Supply Chain - Req Templates tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1771	Data Collection Workbook - Supply Chain - Adjustment Reasons tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1772	Data Collection Workbook - Supply Chain - Adjustment by Location tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1773	Data Collection Workbook - Supply Chain - Par Requisitioning tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1774	Data Collection Workbook - Supply Chain - Par Routes tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1775	Data Collection Workbook - Supply Chain - AutoFax tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1776	Data Collection Workbook - Supply Chain - Approval tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1777	Data Collection Workbook - Supply Chain - Buyer Routing tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1778	Data Collection Workbook - Supply Chain - Ship To tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
1779	Data Collection Workbook - Supply Chain - Additional Amounts	8 wks	Mon 7/15/13	Fri 9/6/13	8
1780	Data Collection Workbook - Supply Chain - Ops Jobs	8 wks	Mon 7/15/13	Fri 9/6/13	8
1781	Data Collection Workbook - Supply Chain - Reports	8 wks	Mon 7/15/13	Fri 9/6/13	8
1782	**BUILD**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
1783	Work Package: Supply Chain - Financial Account Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1760,1761
1784	Work Package: Supply Chain - Location Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1762,1763,1771,1772,
1785	Work Package: Supply Chain - Item Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1764,1767,1768,1769
1786	Work Package: Supply Chain - External Procurement Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1765,1766,1775,1777,
1787	Work Package: Supply Chain - Requisition Process Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1770,1776
1788	Work Package: Supply Chain - Wireless Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1773,1774
1789	Work Package: Supply Chain - Ops Jobs Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1780

ID	Task Name	Duration	Start	Finish	Predecessors
1790	Work Package: Supply Chain - Reports Setup	14 wks	Mon 9/9/13	Fri 12/13/13	1781
1791	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1792	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
1793	QC Test: Supply Chain - Financial Account Setup	3 wks	Mon 12/16/13	Fri 1/3/14	1783
1794	QC Test: Supply Chain - Location Setup	3 wks	Mon 12/16/13	Fri 1/3/14	1784
1795	QC Test: Supply Chain - Item Setup	3 wks	Mon 12/16/13	Fri 1/3/14	1785
1796	QC Test: Supply Chain - External Procurement Setup	3 wks	Mon 12/16/13	Fri 1/3/14	1786
1797	QC Test: Supply Chain - Requisition Process Setup	3 wks	Mon 12/16/13	Fri 1/3/14	1787
1798	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
1799	Localize Unit Test Scripts - Supply Chain	5 wks	Mon 12/16/13	Fri 1/17/14	11
1800	Unit Test Scripts - Supply Chain	3 wks	Mon 1/20/14	Fri 2/7/14	1799
1801	Unit Test: Supply Chain - Financial Account Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1783,1800,1793
1802	Unit Test: Supply Chain - Location Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1784,1800,1794
1803	Unit Test: Supply Chain - Item Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1785,1800,1795
1804	Unit Test: Supply Chain - External Procurement Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1786,1800,1796
1805	Unit Test: Supply Chain - Requisition Process Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1787,1800,1797
1806	Unit Test: Supply Chain - Wireless Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1788,1800
1807	Unit Test: Supply Chain - Ops Jobs Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1789,1800
1808	Unit Test: Supply Chain - Reports Setup	3 wks	Mon 2/10/14	Fri 2/28/14	1790,1800
1809	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
1810	Localize System Test Tracking and Scripts - Supply Chain	1 wk	Mon 12/16/13	Fri 12/20/13	11
1811	First Draft System Test Scripts - Supply Chain	2 wks	Mon 12/23/13	Fri 1/3/14	1810
1812	Final System Test Scripts - Supply Chain	2 wks	Mon 12/23/13	Fri 1/3/14	1810
1813	Complete System Testing - Supply Chain	3 wks	Mon 1/6/14	Fri 1/24/14	1812
1814	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1815	Integration Test Scripts - Supply Chain	5 wks	Mon 12/16/13	Fri 1/17/14	11
1816	Complete Integration Testing - Supply Chain	5 wks	Mon 1/20/14	Fri 2/21/14	1815
1817	Milestone: Conclude All Testing - Supply Chain	0 days	Fri 2/28/14	Fri 2/28/14	1801,1802,1803,1804,
1818	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1819	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1820	Conversion Readiness Assessment - Supply Chain	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1821	Review & Update Conversion Cutover Plan (sent by IA) - Supply Chain	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1822	Complete the Turnover Process documentation- Supply Chain	5 wks	Mon 6/30/14	Fri 8/1/14	18

ID	Task Name	Duration	Start	Finish	Predecessors
1823	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
1824	Complete Post Conversion Assessment Workbook for Supply Chain	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
1825	**PATIENT CARE**	**98.2 wks**	**Fri 12/21/12**	**Fri 11/7/14**	
1826	**SOW #7 - Clinical Documentation and Results (CareDoc / Advanced Care Doc / eMar / PowerOrders)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
1827	**Task 1 Conduct SOW Kick-off/ Mobilization**	**24 wks**	**Mon 12/24/12**	**Fri 6/7/13**	
1828	Subtask 1.1 Develop detailed Sub-Project Work Plan - Clinical Documentation and Results	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
1829	Subtask 1.2 Conduct Initiation session for Clinical Documentation and Results Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
1830	Subtask 1.3 Conduct Comprehension Exercises	2 wks	Mon 5/27/13	Fri 6/7/13	7FS+1 wk
1831	**DESIGN**	**41 wks**	**Mon 4/29/13**	**Fri 2/7/14**	
1832	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**7 wks**	**Mon 4/29/13**	**Fri 6/14/13**	
1833	Conduct Open House Demo Session - CareDoc	1 wk	Mon 5/20/13	Fri 5/24/13	7
1834	Complete CareDoc WBT	4 wks	Mon 5/20/13	Fri 6/14/13	7
1835	Complete Open House Scripts - CareDoc	4 wks	Fri 5/17/13	Fri 6/14/13	7
1836	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
1837	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - CareDoc Management)	1 wk	Mon 5/20/13	Fri 5/24/13	7
1838	Perform Phase X Compatibility Assessment - eMAR	1 wk	Mon 5/20/13	Fri 5/24/13	7
1839	Conduct Open House Demo Session - eMAR	1 wk	Mon 5/20/13	Fri 5/24/13	7
1840	Complete eMAR WBT	4 wks	Mon 5/20/13	Fri 6/14/13	7
1841	Complete Open House Scripts - eMAR	4 wks	Fri 5/17/13	Fri 6/14/13	7
1842	Onsite Workflow Assessment - eMAR	1 wk	Mon 5/20/13	Fri 5/24/13	7
1843	Perform Phase X Compatibility Assessment - Orders	1 wk	Mon 4/29/13	Fri 5/3/13	5
1844	Conduct Open House Demo Session - Orders	1 wk	Mon 5/6/13	Fri 5/10/13	5
1845	Complete Orders WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
1846	Complete Open House Scripts - Orders	4 wks	Thu 5/2/13	Thu 5/30/13	5
1847	Onsite Workflow Assessment - Orders	1 wk	Mon 5/20/13	Fri 5/24/13	7
1848	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	2 wks	Mon 5/27/13	Fri 6/7/13	1847
1849	**Data Collection**	**18 wks**	**Mon 10/7/13**	**Fri 2/7/14**	
1850	Data Collection Workbook - All DTA's > CareDoc DTAs	8 wks	Mon 10/7/13	Fri 11/29/13	9

ID	Task Name	Duration	Start	Finish	Predecessors
1851	Data Collection Workbook - Interdisciplinary Plans of Care	8 wks	Mon 10/7/13	Fri 11/29/13	9
1852	Acute Care PowerOrders Care Doc Order Management Workbook > Task Lists	8 wks	Mon 10/7/13	Fri 11/29/13	9
1853	Acute Care PowerOrders Care Doc Order Management Workbook > Tasks	8 wks	Mon 10/7/13	Fri 11/29/13	9
1854	DDM - Care Delivery:03 Documentation Management > Overdue tasks	8 wks	Mon 10/7/13	Fri 11/29/13	9
1855	Data Collection Workbook - Intake and Output 2G	8 wks	Mon 10/7/13	Fri 11/29/13	9
1856	Data Collection Workbook - Acute Care PowerOrders Care Doc Adhoc Folders	8 wks	Mon 10/7/13	Fri 11/29/13	9
1857	Data Collection Workbook - Core Systems Security > CareDoc Security	8 wks	Mon 10/7/13	Fri 11/29/13	9
1858	Data Collection Workbook - PowerForm Modifications	8 wks	Mon 10/7/13	Fri 11/29/13	9
1859	BedRock - CareCompass	8 wks	Mon 10/7/13	Fri 11/29/13	9
1860	BedRock - Nursing Communication MPage	8 wks	Mon 10/7/13	Fri 11/29/13	9
1861	Data Collection Workbook - Family and Social History	8 wks	Mon 10/7/13	Fri 11/29/13	9
1862	Data Collection Workbook - Activity View	8 wks	Mon 10/7/13	Fri 11/29/13	9
1863	Data Collection Workbook - Acute Care PowerOrders®, Care Doc Staff Assignment Group Design	8 wks	Mon 12/16/13	Fri 2/7/14	11
1864	Data Collection Workbook - IDS Discipline and Event Mapping	8 wks	Mon 12/16/13	Fri 2/7/14	11
1865	Data Collection Workbook - Discharge Process > Task Groups	8 wks	Mon 10/7/13	Fri 11/29/13	9
1866	Data Collection Workbook - Discharge Process > Preference	8 wks	Mon 10/7/13	Fri 11/29/13	9
1867	Data Collection Workbook - Discharge Process > Clinical and Patient Summaries	8 wks	Mon 10/7/13	Fri 11/29/13	9
1868	Data Collection Workbook - CareNet® eMar Additional Doc Elements	8 wks	Mon 10/7/13	Fri 11/29/13	9
1869	BedRock - Related Results Wizard	8 wks	Mon 10/7/13	Fri 11/29/13	9
1870	Data Collection Workbook - CareNet® Nurse Witness Order Management	8 wks	Mon 10/7/13	Fri 11/29/13	9
1871	Data collection Workbook - Acute Care PowerOrders Nurse Prep	8 wks	Mon 10/7/13	Fri 11/29/13	9
1872	Acute Care PowerOrders Req Routing Acute Care PowerOrders Requisition Order Mgmt	8 wks	Mon 10/7/13	Fri 11/29/13	9
1873	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
1874	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
1875	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	1874
1876	**Task 4 Conduct Design Review**	**13 wks**	**Mon 10/7/13**	**Fri 1/3/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
1877	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
1878	Subtask 4.2 Conduct Design Review Session follow-up	3 mons	Mon 10/14/13	Fri 1/3/14	1877
1879	Subtask 4.3 Conduct Workflow Localization	2 wks	Mon 10/14/13	Fri 10/25/13	1877
1880	Subtask 4.4 Conduct Clinician Documentation Workflow Workshop	1 wk	Mon 10/28/13	Fri 11/1/13	1879
1881	Subtask 4.5 Develop Final Detailed Design Document	4 wks	Mon 11/4/13	Fri 11/29/13	1880
1882	**Task 5 Complete Partial System Build (BUILD)**	**44 wks**	**Mon 7/15/13**	**Fri 5/16/14**	
1883	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	44 wks	Mon 7/15/13	Fri 5/16/14	8
1884	Work Package: Care Documentation - All DTAs	14 wks	Mon 12/2/13	Fri 3/7/14	1850
1885	Work Package: Care Documentation - Nursing Outcome and Intervention PowerPlans	14 wks	Mon 12/2/13	Fri 3/7/14	1851
1886	Work Package: Care Documentation - Task Lists	14 wks	Mon 12/2/13	Fri 3/7/14	1852
1887	Work Package: Care Documentation - Tasks	14 wks	Mon 12/2/13	Fri 3/7/14	1853
1888	Work Package: Care Documentation - Purge Criteria	14 wks	Mon 12/2/13	Fri 3/7/14	1854
1889	Work Package: Care Documentation - IO 2G	14 wks	Mon 12/2/13	Fri 3/7/14	1855
1890	Work Package: Care Documentation - Ad Hoc Charting Folders	14 wks	Mon 12/2/13	Fri 3/7/14	1856
1891	Work Package: Care Documentation - PowerForm Textual Rendition	14 wks	Mon 7/15/13	Fri 10/18/13	8
1892	Work Package: Care Documentation - Pediatric Growth Chart	14 wks	Mon 12/2/13	Fri 3/7/14	1857
1893	Work Package: Care Documentation - PowerForms	14 wks	Mon 12/2/13	Fri 3/7/14	1858
1894	Work Package: Care Documentation - CareCompass	14 wks	Mon 12/2/13	Fri 3/7/14	1859
1895	Work Package: Care Documentation - Nursing Communication MPage	14 wks	Mon 12/2/13	Fri 3/7/14	1860
1896	Work Package: Care Documentation - Family History	14 wks	Mon 12/2/13	Fri 3/7/14	1861
1897	Work Package: Care Documentation - Social History	14 wks	Mon 12/2/13	Fri 3/7/14	1861
1898	Work Package: Care Documentation - Activity View	14 wks	Mon 12/2/13	Fri 3/7/14	1862
1899	Work Package: Care Documentation - Staff Assignment Groups	14 wks	Mon 2/10/14	Fri 5/16/14	1863
1900	Work Package: Care Documentation - Interdisciplinary Summary	14 wks	Mon 2/10/14	Fri 5/16/14	1864
1901	Work Package: Care Documentation - Depart Process - Tracking Groups	14 wks	Mon 12/2/13	Fri 3/7/14	1865
1902	Work Package: Care Documentation - Depart Process - Preferences	14 wks	Mon 12/2/13	Fri 3/7/14	1866
1903	Work Package: Care Documentation - Depart Process - Clinical and Patient Summaries	14 wks	Mon 12/2/13	Fri 3/7/14	1867
1904	Work Package: eMAR - Scheduled, Unscheduled, PRN Medication Admin Response	14 wks	Mon 12/2/13	Fri 3/7/14	1868
1905	Work Package: eMAR - Emar Additional Elements	14 wks	Mon 12/2/13	Fri 3/7/14	1869
1906	Work Package: eMAR - Nurse Witness	14 wks	Mon 12/2/13	Fri 3/7/14	1870

ID	Task Name	Duration	Start	Finish	Predecessors
1907	Work Package: PowerOrders - Care Documentation - Nurse Prep	14 wks	Mon 12/2/13	Fri 3/7/14	1871
1908	Work Package: PowerOrders - Requisition Routing	14 wks	Mon 12/2/13	Fri 3/7/14	1872
1909	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 3/7/14	Fri 3/7/14	1908
1910	**Task 6 Conduct System Validation**	**13 wks**	**Mon 12/16/13**	**Fri 3/14/14**	
1911	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
1912	Subtask 6.2 Conduct System Validation Session Follow-up	3 mons	Mon 12/23/13	Fri 3/14/14	1911
1913	**Task 7 Complete Build of Clinical Documentation and Results and Conduct Unit and System Testing (TEST)**	**33 wks**	**Mon 10/21/13**	**Fri 6/6/14**	
1914	Subtask 7.1 Complete System Build	0 days	Fri 3/7/14	Fri 3/7/14	1884
1915	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2 mons	Mon 3/10/14	Fri 5/2/14	1884
1916	**Quality Center Testing**	**23 wks**	**Mon 10/21/13**	**Fri 3/28/14**	
1917	QC Test: Care Documentation - All DTAs	3 wks	Mon 3/10/14	Fri 3/28/14	1884
1918	QC Test: Care Documentation - Nursing Outcome and Intervention PowerPlans	3 wks	Mon 3/10/14	Fri 3/28/14	1885
1919	QC Test: Care Documentation - Task Lists	3 wks	Mon 3/10/14	Fri 3/28/14	1886
1920	QC Test: Care Documentation - Purge Criteria	3 wks	Mon 3/10/14	Fri 3/28/14	1887
1921	QC Test: Care Documentation - IO 2G	3 wks	Mon 3/10/14	Fri 3/28/14	1888
1922	QC Test: Care Documentation - Ad Hoc Charting Folders	3 wks	Mon 3/10/14	Fri 3/28/14	1889
1923	QC Test: Care Documentation - PowerForm Textual Rendition	3 wks	Mon 3/10/14	Fri 3/28/14	1890
1924	QC Test: Care Documentation - Pediatric Growth Chart	3 wks	Mon 10/21/13	Fri 11/8/13	1891
1925	QC Test: Care Documentation - PowerForms	3 wks	Mon 3/10/14	Fri 3/28/14	1892
1926	QC Test: Care Documentation - Depart Process - Tracking Groups	3 wks	Mon 3/10/14	Fri 3/28/14	1893
1927	QC Test: Care Documentation - Depart Process - Preferences	3 wks	Mon 3/10/14	Fri 3/28/14	1901
1928	QC Test: Care Documentation - Depart Process - Clinical and Patient Summaries	3 wks	Mon 3/10/14	Fri 3/28/14	1902
1929	QC Test: eMAR - Scheduled, Unscheduled, PRN Medication Admin Response	3 wks	Mon 3/10/14	Fri 3/28/14	1904
1930	QC Test: eMAR - Emar Additional Elements	3 wks	Mon 3/10/14	Fri 3/28/14	1905
1931	QC Test: eMAR - Nurse Witness	3 wks	Mon 3/10/14	Fri 3/28/14	1906
1932	QC Test: PowerOrders - Requisition Routing	3 wks	Mon 3/10/14	Fri 3/28/14	1908
1933	**Unit Testing**	**13 wks**	**Mon 3/10/14**	**Fri 6/6/14**	**1903**
1934	Localize Unit Test Scripts - CareDoc	5 wks	Mon 3/10/14	Fri 4/11/14	11
1935	Unit Test Scripts - CareDoc	3 wks	Mon 4/14/14	Fri 5/2/14	1934

ID	Task Name	Duration	Start	Finish	Predecessors
1936	Unit Test: Care Documentation - All DTAs	3 wks	Mon 5/5/14	Fri 5/23/14	1884,1935,1917
1937	Unit Test: Care Documentation - Nursing Outcome and Intervention PowerPlans	3 wks	Mon 5/5/14	Fri 5/23/14	1885,1935,1918
1938	Unit Test: Care Documentation - Task Lists	3 wks	Mon 5/5/14	Fri 5/23/14	1886,1935,1919
1939	Unit Test: Care Documentation - Tasks	3 wks	Mon 5/5/14	Fri 5/23/14	1887,1935,1920
1940	Unit Test: Care Documentation - Purge Criteria	3 wks	Mon 5/5/14	Fri 5/23/14	1888,1935,1921
1941	Unit Test: Care Documentation - IO 2G	3 wks	Mon 5/5/14	Fri 5/23/14	1889,1935,1922
1942	Unit Test: Care Documentation - Ad Hoc Charting Folders	3 wks	Mon 5/5/14	Fri 5/23/14	1890,1935,1923
1943	Unit Test: Care Documentation - PowerForm Textual Rendition	3 wks	Mon 5/5/14	Fri 5/23/14	1891,1935,1924
1944	Unit Test: Care Documentation - Pediatric Growth Chart	3 wks	Mon 5/5/14	Fri 5/23/14	1892,1935,1925
1945	Unit Test: Care Documentation - PowerForms	3 wks	Mon 5/5/14	Fri 5/23/14	1893,1935
1946	Unit Test: Care Documentation - CareCompass	3 wks	Mon 5/5/14	Fri 5/23/14	1894,1935
1947	Unit Test: Care Documentation - Nursing Communication MPage	3 wks	Mon 5/5/14	Fri 5/23/14	1895,1935
1948	Unit Test: Care Documentation - Family History	3 wks	Mon 5/5/14	Fri 5/23/14	1896,1935
1949	Unit Test: Care Documentation - Social History	3 wks	Mon 5/5/14	Fri 5/23/14	1897,1935
1950	Unit Test: Care Documentation - Activity View	3 wks	Mon 5/5/14	Fri 5/23/14	1898,1935
1951	Unit Test: Care Documentation - Staff Assignment Groups	3 wks	Mon 5/19/14	Fri 6/6/14	1935,1899
1952	Unit Test: Care Documentation - Interdisciplinary Summary	3 wks	Mon 5/19/14	Fri 6/6/14	1900,1935
1953	Unit Test: Care Documentation - Depart Process - Tracking Groups	3 wks	Mon 5/5/14	Fri 5/23/14	1935,1901,1926
1954	Unit Test: Care Documentation - Depart Process - Preferences	3 wks	Mon 5/5/14	Fri 5/23/14	1935,1902,1927
1955	Unit Test: Care Documentation - Depart Process - Clinical and Patient Summaries	3 wks	Mon 5/5/14	Fri 5/23/14	1935,1903,1928
1956	Localize Unit Test Scripts - eMAR	5 wks	Mon 3/10/14	Fri 4/11/14	11
1957	Unit Test Scripts - eMAR	3 wks	Mon 4/14/14	Fri 5/2/14	1956
1958	Unit Test: eMAR - Scheduled, Unscheduled, PRN Medication Admin Response	3 wks	Mon 5/5/14	Fri 5/23/14	1904,1957,1929
1959	Unit Test: eMAR - Emar Additional Elements	3 wks	Mon 5/5/14	Fri 5/23/14	1905,1957,1930
1960	Unit Test: eMAR - Nurse Witness	3 wks	Mon 5/5/14	Fri 5/23/14	1906,1957,1931
1961	Localize Unit Test Scripts - Orders	5 wks	Mon 3/10/14	Fri 4/11/14	11
1962	Unit Test Scripts - Orders	3 wks	Mon 4/14/14	Fri 5/2/14	1961
1963	Unit Test: PowerOrders - Care Documentation - Nurse Preps	3 wks	Mon 5/5/14	Fri 5/23/14	1907,1962
1964	Unit Test: PowerOrders - Requisition Routing	3 wks	Mon 5/5/14	Fri 5/23/14	1932,1962,1908
1965	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
1966	Localize System Test Tracking and Scripts - CareDoc	1 wk	Mon 12/16/13	Fri 12/20/13	11

ID	Task Name	Duration	Start	Finish	Predecessors
1967	First Draft System Test Scripts - CareDoc	2 wks	Mon 12/23/13	Fri 1/3/14	1966
1968	Final System Test Scripts - CareDoc	2 wks	Mon 12/23/13	Fri 1/3/14	1966
1969	Complete System Testing - CareDoc	3 wks	Mon 1/6/14	Fri 1/24/14	1968
1970	Localize System Test Tracking and Scripts - eMAR	1 wk	Mon 12/16/13	Fri 12/20/13	11
1971	First Draft System Test Scripts - eMAR	2 wks	Mon 12/23/13	Fri 1/3/14	1970
1972	Final System Test Scripts - eMAR	2 wks	Mon 12/23/13	Fri 1/3/14	1970
1973	Complete System Testing - eMAR	3 wks	Mon 1/6/14	Fri 1/24/14	1972
1974	Localize System Test Tracking and Scripts - Orders	1 wk	Mon 12/16/13	Fri 12/20/13	11
1975	First Draft System Test Scripts - Orders	2 wks	Mon 12/23/13	Fri 1/3/14	1974
1976	Final System Test Scripts - Orders	2 wks	Mon 12/23/13	Fri 1/3/14	1974
1977	Complete System Testing - Orders	3 wks	Mon 1/6/14	Fri 1/24/14	1976
1978	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
1979	Integration Test Scripts - CareDoc	5 wks	Mon 12/16/13	Fri 1/17/14	11
1980	Complete Integration Testing - CareDoc	5 wks	Mon 1/20/14	Fri 2/21/14	1979
1981	Integration Test Scripts - eMAR	5 wks	Mon 12/16/13	Fri 1/17/14	11
1982	Complete Integration Testing - eMAR	5 wks	Mon 1/20/14	Fri 2/21/14	1981
1983	Milestone: Conclude All Testing - CareDoc	0 days	Fri 6/6/14	Fri 6/6/14	1936,1937,1938,1939,
1984	Milestone: Conclude All Testing - eMAR	0 days	Fri 5/23/14	Fri 5/23/14	1958,1959,1960,1973,
1985	Integration Test Scripts - Orders	5 wks	Mon 12/16/13	Fri 1/17/14	11
1986	Complete Integration Testing - Orders	5 wks	Mon 1/20/14	Fri 2/21/14	1985
1987	Milestone: Conclude All Testing - Orders	0 days	Fri 5/23/14	Fri 5/23/14	1961,1962,1963,1964
1988	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 5/23/14	Fri 5/23/14	1987
1989	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
1990	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
1991	Conversion Readiness Assessment - CareDoc	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1992	Review & Update Conversion Cutover Plan (sent by IA) - CareDoc	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1993	Complete the Turnover Process documentation- CareDoc	5 wks	Mon 6/30/14	Fri 8/1/14	18
1994	Conversion Readiness Assessment - eMAR	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1995	Review & Update Conversion Cutover Plan (sent by IA) - eMAR	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1996	Complete the Turnover Process documentation- eMAR	5 wks	Mon 6/30/14	Fri 8/1/14	18
1997	Conversion Readiness Assessment - Orders	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
1998	Review & Update Conversion Cutover Plan (sent by IA) - Orders	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
1999	Complete the Turnover Process documentation- Orders	5 wks	Mon 6/30/14	Fri 8/1/14	18

ID	Task Name	Duration	Start	Finish	Predecessors
2000	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2001	Complete Post Conversion Assessment Workbook for CareDoc	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2002	Complete Post Conversion Assessment Workbook for eMAR	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2003	Complete Post Conversion Assessment Workbook for Orders	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2004	**CareAware iAware Critical Care / Infusion Management**	**73 wks**	**Mon 4/29/13**	**Fri 9/19/14**	
2005	**DESIGN**	**31 wks**	**Mon 4/29/13**	**Fri 11/29/13**	
2006	**Establish Context for Design**	**4.8 wks**	**Mon 4/29/13**	**Thu 5/30/13**	
2007	Conduct Open House Demo Session - CareAwareiAwareCritCare	1 wk	Mon 4/29/13	Fri 5/3/13	5
2008	Onsite Workflow Assessment - CareAwareiAwareCritCare	1 wk	Mon 5/20/13	Fri 5/24/13	7
2009	Complete CareAware iAware Functional Education Training (WBT)	1 day	Mon 4/29/13	Mon 4/29/13	5
2010	Complete Open House Scripts - CareAwareInfusionMgmt	4 wks	Thu 5/2/13	Thu 5/30/13	5
2011	Onsite Workflow Assessment - CareAwareInfusionMgmt	1 wk	Mon 5/20/13	Fri 5/24/13	7
2012	Complete CareAware iAware Functional Education Training (WBT)	1 day	Mon 4/29/13	Mon 4/29/13	5
2013	**Data Collection**	**20 wks**	**Mon 7/15/13**	**Fri 11/29/13**	
2014	DDM > CareAware iAware > Critical Care (Security & Preferences)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2015	Data Collection Workbook - CareAware™ iAware™ for Critical Care and Infusion Management > CKI Mapping	8 wks	Mon 10/7/13	Fri 11/29/13	9
2016	Data Collection Workbook - CareAware™ iAware™ for Critical Care and Infusion Management > Public Tags	8 wks	Mon 10/7/13	Fri 11/29/13	9
2017	DDM > CareAware iAware > Infusion Management (Security and Preferences)	8 wks	Mon 10/7/13	Fri 11/29/13	9
2018	Data Collection Workbook - CareAware™ iAware™ for Critical Care and Infusion Management > CKI Mapping	8 wks	Mon 10/7/13	Fri 11/29/13	9
2019	Data Collection Workbook - CareAware™ iAware™ for Critical Care and Infusion Management > Public Tags	8 wks	Mon 10/7/13	Fri 11/29/13	9
2020	**BUILD**	**26 wks**	**Mon 9/9/13**	**Fri 3/7/14**	
2021	Work Package: CareAware iAware Critical Care > Security	14 wks	Mon 9/9/13	Fri 12/13/13	2014
2022	Work Package: CareAware iAware Critical Care > CKI Mapping for Gadgets	14 wks	Mon 12/2/13	Fri 3/7/14	2015
2023	Work Package: CareAware iAware Critical Care > Public Tags	14 wks	Mon 12/2/13	Fri 3/7/14	2016
2024	Work Package: CareAware iAware Critical Care > Gadget Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2014
2025	Work Package: CareAware iAware Infusion Management > Security	14 wks	Mon 12/2/13	Fri 3/7/14	2017
2026	Work Package: CareAware iAware Infusion Management > CKI Mapping for Gadgets	14 wks	Mon 12/2/13	Fri 3/7/14	2018
2027	Work Package: CareAware iAware Infusion Management > Public Tags	14 wks	Mon 12/2/13	Fri 3/7/14	2019

ID	Task Name	Duration	Start	Finish	Predecessors
2028	Work Package: CareAware iAware Infusion Management > Gadget Preferences	14 wks	Mon 12/2/13	Fri 3/7/14	2017
2029	**TEST**	**15 wks**	**Mon 12/16/13**	**Fri 3/28/14**	
2030	**Unit Testing**	**15 wks**	**Mon 12/16/13**	**Fri 3/28/14**	
2031	Localize Unit Test Scripts - CareAwareiAwareCritCare	5 wks	Mon 12/16/13	Fri 1/17/14	11
2032	Unit Test Scripts - CareAwareiAwareCritCare	3 wks	Mon 1/20/14	Fri 2/7/14	2031
2033	Unit Test: CareAware iAware Critical Care > Security	3 wks	Mon 3/10/14	Fri 3/28/14	2032,2025
2034	Unit Test: CareAware iAware Critical Care > CKI Mapping for Gadgets	3 wks	Mon 3/10/14	Fri 3/28/14	2032,2022
2035	Unit Test: CareAware iAware Critical Care > Public Tags	3 wks	Mon 3/10/14	Fri 3/28/14	2032,2023
2036	Unit Test: CareAware iAware Critical Care > Gadget Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2032,2024
2037	Localize Unit Test Scripts - INet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2038	Unit Test Scripts - INet	3 wks	Mon 1/20/14	Fri 2/7/14	2037
2039	Unit Test: CareAware iAware Infusion Management > Security	3 wks	Mon 2/10/14	Fri 2/28/14	2021,2038
2040	Unit Test: CareAware iAware Infusion Management > CKI Mapping for Gadgets	3 wks	Mon 3/10/14	Fri 3/28/14	2026,2038
2041	Unit Test: CareAware iAware Infusion Management > Public Tags	3 wks	Mon 3/10/14	Fri 3/28/14	2027,2038
2042	Unit Test: CareAware iAware Infusion Management > Gadget Preferences	3 wks	Mon 3/10/14	Fri 3/28/14	2028,2038
2043	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2044	Localize System Test Tracking and Scripts - CareAwareiAwareCritCare	1 wk	Mon 12/16/13	Fri 12/20/13	11
2045	First Draft System Test Scripts - CareAwareiAwareCritCare	2 wks	Mon 12/23/13	Fri 1/3/14	2044
2046	Final System Test Scripts - CareAwareiAwareCritCare	2 wks	Mon 12/23/13	Fri 1/3/14	2044
2047	Complete System Testing - CareAwareiAwareCritCare	3 wks	Mon 1/6/14	Fri 1/24/14	2046
2048	Localize System Test Tracking and Scripts - CareAwareInfusionMgmt	1 wk	Mon 12/16/13	Fri 12/20/13	11
2049	First Draft System Test Scripts - CareAwareInfusionMgmt	2 wks	Mon 12/23/13	Fri 1/3/14	2048
2050	Final System Test Scripts - CareAwareInfusionMgmt	2 wks	Mon 12/23/13	Fri 1/3/14	2048
2051	Complete System Testing - CareAwareInfusionMgmt	3 wks	Mon 1/6/14	Fri 1/24/14	2050
2052	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2053	Integration Test Scripts - CareAwareiAwareCritCare	5 wks	Mon 12/16/13	Fri 1/17/14	11
2054	Complete Integration Testing - CareAwareiAwareCritCare	5 wks	Mon 1/20/14	Fri 2/21/14	2053
2055	Integration Test Scripts - CareAwareInfusionMgmt	5 wks	Mon 12/16/13	Fri 1/17/14	11
2056	Complete Integration Testing - CareAwareInfusionMgmt	5 wks	Mon 1/20/14	Fri 2/21/14	2055
2057	Milestone: Conclude All Testing - CareAwareiAwareCritCare	0 days	Fri 3/28/14	Fri 3/28/14	2033,2047,2054,2034,
2058	Milestone: Conclude All Testing - CareAwareInfusionMgmt	0 days	Fri 3/28/14	Fri 3/28/14	2039,2040,2041,2042,

ID	Task Name	Duration	Start	Finish	Predecessors
2059	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2060	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2061	Conversion Readiness Assessment - CareAwareiAwareCritCare	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2062	Review & Update Conversion Cutover Plan (sent by IA) - CareAwareiAwareCritCare	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2063	Complete the Turnover Process documentation- CareAwareiAwareCritCare	5 wks	Mon 6/30/14	Fri 8/1/14	18
2064	Conversion Readiness Assessment - CareAwareInfusionMgmt	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2065	Review & Update Conversion Cutover Plan (sent by IA) - CareAwareInfusionMgmt	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2066	Complete the Turnover Process documentation- CareAwareInfusionMgmt	5 wks	Mon 6/30/14	Fri 8/1/14	18
2067	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2068	Complete Post Conversion Assessment Workbook for CareAwareiAwareCritCare	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2069	Complete Post Conversion Assessment Workbook for CareAwareInfusionMgmt	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2070	**CareAdmin**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
2071	**DESIGN**	**42 wks**	**Mon 4/29/13**	**Fri 2/14/14**	
2072	**Establish Context for Design**	**4 wks**	**Mon 4/29/13**	**Fri 5/24/13**	
2073	Complete CareAdmin WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2074	Onsite Workflow Assessment - CareAdmin	1 wk	Mon 5/20/13	Fri 5/24/13	7
2075	Onsite Workflow Assessment - IV Auto Programming	1 wk	Mon 5/20/13	Fri 5/24/13	7
2076	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
2077	Data Collection Workbook - Core Systems Security > PowerChart Security tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2078	Data Collection Workbook - Millennium POC Rules	8 wks	Mon 7/15/13	Fri 9/6/13	8
2079	DDM : CareAdmin	8 wks	Mon 7/15/13	Fri 9/6/13	8
2080	Data Collection Workbook - IV Auto Programming	8 wks	Mon 7/15/13	Fri 9/6/13	8
2081	Data Collection Workbook: Drug Library Mapping	8 wks	Mon 7/15/13	Fri 9/6/13	8
2082	**Devices**	**20 wks**	**Mon 9/30/13**	**Fri 2/14/14**	
2083	Select & Order 10 Point of Care Devices	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
2084	Install and Configure Scanners	3 wks	Mon 12/9/13	Fri 12/27/13	11SS
2085	Select & Order Final Point of Care Devices	1 wk	Mon 2/10/14	Fri 2/14/14	12SS

ID	Task Name	Duration	Start	Finish	Predecessors
2086	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
2087	Work Package: CareAdmin - Application Groups	14 wks	Mon 9/9/13	Fri 12/13/13	2077
2088	Work Package: CareAdmin - Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2079
2089	Work Package: CareAdmin - Task Access	14 wks	Mon 9/9/13	Fri 12/13/13	2077
2090	Work Package: CareAdmin - Reports	14 wks	Mon 7/15/13	Fri 10/18/13	8
2091	Work Package: CareAdmin - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	2078
2092	Work Package: CareAdmin - AdHoc	14 wks	Mon 9/9/13	Fri 12/13/13	2079
2093	Work Package: CareAdmin - BarCode Format Tool	14 wks	Mon 9/9/13	Fri 12/13/13	2079
2094	Work Package: CareAdmin Codesets	14 wks	Mon 9/9/13	Fri 12/13/13	2079
2095	Work Package: CareAdmin - Privs	14 wks	Mon 9/9/13	Fri 12/13/13	2079
2096	Work Package: IV Auto Programming	14 wks	Mon 9/9/13	Fri 12/13/13	2080
2097	Work Package: Drug Library Mapping	14 wks	Mon 9/9/13	Fri 12/13/13	2081
2098	Work Package: Pump Vendor Smart Pump Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
2099	Work Package: Client Drug Library and Millennium Identifiers	14 wks	Mon 7/15/13	Fri 10/18/13	8
2100	**TEST**	**62.2 wks**	**Fri 12/21/12**	**Fri 2/28/14**	
2101	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
2102	Localize Unit Test Scripts - CareAdmin	5 wks	Mon 12/16/13	Fri 1/17/14	11
2103	Localize Unit Test Scripts - IV Auto Programming	5 wks	Mon 12/16/13	Fri 1/17/14	11
2104	Unit Test Scripts - CareAdmin	3 wks	Mon 1/20/14	Fri 2/7/14	2102
2105	Unit Test Scripts - IV Auto Programming	3 wks	Mon 1/20/14	Fri 2/7/14	2103
2106	Unit Test: CareAdmin - Application Groups	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2087
2107	Unit Test: CareAdmin - Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2088
2108	Unit Test: CareAdmin - Task Access	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2089
2109	Unit Test: CareAdmin - Reports	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2090
2110	Unit Test: CareAdmin - Rules	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2091
2111	Unit Test: CareAdmin - AdHoc	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2092
2112	Unit Test: CareAdmin - BarCode Format Tool	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2093
2113	Unit Test: CareAdmin Codesets	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2094
2114	Unit Test: CareAdmin - Privs	3 wks	Mon 2/10/14	Fri 2/28/14	2104,2095
2115	Unit Test: IVAP - Pump Drug Library	3 wks	Mon 2/10/14	Fri 2/28/14	2105,2096,2097,2099
2116	Unit Test: IVAP - Infusions to be programmed	3 wks	Mon 2/10/14	Fri 2/28/14	2105,2098
2117	**System Testing**	**57.2 wks**	**Fri 12/21/12**	**Fri 1/24/14**	
2118	Localize System Test Tracking and Scripts - CareAdmin	1 wk	Mon 12/16/13	Fri 12/20/13	11

ID	Task Name	Duration	Start	Finish	Predecessors
2119	First Draft System Test Scripts - CareAdmin	2 wks	Mon 12/23/13	Fri 1/3/14	2118
2120	Final System Test Scripts - CareAdmin	2 wks	Mon 12/23/13	Fri 1/3/14	2118
2121	Complete System Testing - CareAdmin	3 wks	Mon 1/6/14	Fri 1/24/14	2120
2122	Localize System Test Tracking and Scripts - IV Auto Programming	1 wk	Fri 12/21/12	Thu 12/27/12	
2123	First Draft System Test Scripts - IV Auto Programming	2 wks	Fri 12/28/12	Thu 1/10/13	2122
2124	Final System Test Scripts - IV Auto Programming	2 wks	Fri 1/11/13	Thu 1/24/13	2122
2125	Complete System Testing - IV Auto Programming	3 wks	Fri 1/25/13	Thu 2/14/13	2124
2126	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2127	Integration Test Scripts - CareAdmin	5 wks	Mon 12/16/13	Fri 1/17/14	11
2128	Complete Integration Testing - CareAdmin	5 wks	Mon 1/20/14	Fri 2/21/14	2127
2129	Integration Test Scripts - CareAdmin	5 wks	Mon 12/16/13	Fri 1/17/14	11
2130	Complete Integration Testing - CareAdmin	5 wks	Mon 1/20/14	Fri 2/21/14	2129
2131	Milestone: Conclude All Testing - CareAdmin	0 days	Fri 2/28/14	Fri 2/28/14	2121,2128,2106,2107,
2132	Milestone: Conclude All Testing - IV Auto Programming	0 days	Fri 2/28/14	Fri 2/28/14	2115,2116
2133	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2134	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2135	Conversion Readiness Assessment - CareAdmin	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2136	Review & Update Conversion Cutover Plan (sent by IA) - CareAdmin	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2137	Complete the Turnover Process documentation- CareAdmin	5 wks	Mon 6/30/14	Fri 8/1/14	18
2138	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2139	Complete Post Conversion Assessment Workbook for CareAdmin	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2140	**SOW #8 - Order Management, CPOE and Decision Support (CPOE (Pharmacy / Physician Track / PowerOrders))**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
2141	**Task 1 Conduct SOW Kick-off/ Mobilization**	**24 wks**	**Mon 12/24/12**	**Fri 6/7/13**	
2142	Subtask 1.1 Develop detailed Sub-Project Work Plan - Order Management, CPOE and Decision Support	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
2143	Subtask 1.2 Conduct Initiation session for Order Management, CPOE and Decision Support Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
2144	Subtask 1.3 Conduct Comprehension Exercises	2 wks	Mon 5/27/13	Fri 6/7/13	7FS+1 wk
2145	**DESIGN**	**33.2 wks**	**Fri 4/12/13**	**Fri 11/29/13**	
2146	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**15 wks**	**Mon 4/29/13**	**Fri 8/9/13**	
2147	Conduct Open House Demo Session - CPOE,Orders	1 wk	Mon 5/6/13	Fri 5/10/13	5
2148	Complete CPOE WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2149	Complete Open House Scripts - CPOE,Orders	4 wks	Thu 5/2/13	Thu 5/30/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
2150	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
2151	Onsite Workflow Assessment - Physician Track	1 wk	Mon 5/20/13	Fri 5/24/13	7
2152	Review Order Catalog Audit	12 wks	Fri 5/17/13	Fri 8/9/13	7
2153	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - CPOE,PharmNet)	1 wk	Mon 5/20/13	Fri 5/24/13	7
2154	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	3 wks	Mon 5/27/13	Fri 6/14/13	2153
2155	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
2156	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
2157	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	2156
2158	**Task 4 Conduct Design Review**	**8 wks**	**Mon 10/7/13**	**Fri 11/29/13**	
2159	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
2160	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/21/13	Fri 10/25/13	2159FS+1 wk
2161	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/21/13	Fri 10/25/13	2159FS+1 wk
2162	Subtask 4.4 Conduct Order Management, CPOE and Decision Support Workflow Workshop	1 wk	Mon 10/28/13	Fri 11/1/13	2161
2163	Subtask 4.5 Develop Final Detailed Design Document	4 wks	Mon 11/4/13	Fri 11/29/13	2162
2164	**Data Collection**	**33.2 wks**	**Fri 4/12/13**	**Fri 11/29/13**	
2165	DELIVERABLE: Order Set Development Tracking Tool	10 wks	Fri 4/12/13	Thu 6/20/13	35
2166	Finalize Orderset Design	2 wks	Mon 7/15/13	Fri 7/26/13	8
2167	DELIVERABLE: Style Guide	2 wks	Mon 7/29/13	Fri 8/9/13	8,2166
2168	Data Collection Worbook - Physician Adoption Order Set PowerPlan	8 wks	Mon 7/15/13	Fri 9/6/13	8
2169	Data Collection Workbook - Discharge Process	8 wks	Mon 7/15/13	Fri 9/6/13	8
2170	DDM > Care Delivery: 04 - Medication Integration > 37 - Home Medication Documentation and Medication Reconciliation Process	8 wks	Mon 7/15/13	Fri 9/6/13	8
2171	Data Collection Workbook - Diagnosis and Problems Folder	8 wks	Mon 7/15/13	Fri 9/6/13	8
2172	Data Collection Workbook - Acute Care PowerOrders Order Management Workbook > Orders	8 wks	Mon 7/15/13	Fri 9/6/13	8
2173	Data Collection Workbook - Acute Care PowerOrders > Order Entry Formats	8 wks	Mon 7/15/13	Fri 9/6/13	8
2174	Data Collection Workbook - Acute Care PowerOrders Order Management Workbook > Order Entry Fields	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2175	Data Collection Workbook - Acute Care PowerOrder Order Folder Content	8 wks	Mon 10/7/13	Fri 11/29/13	9
2176	Data Collection Workbook - Acute Care PowerOrders Related Results	8 wks	Mon 10/7/13	Fri 11/29/13	9
2177	BedRock - Order Sentences	8 wks	Mon 10/7/13	Fri 11/29/13	9
2178	Data Collection Workbook - PharmNet Inpatient - Order Entry Formats	8 wks	Mon 7/15/13	Fri 9/6/13	8
2179	Data Collection Workbook - PharmNet Inpatient - Bedrock: Order Catalog Virtual View and Product Linking	8 wks	Mon 7/15/13	Fri 9/6/13	8
2180	Data Collection Workbook - PharmNet Inpatient IV Sets CPOE Order Sets and/or Bedrock: IV Sets and Medication Order Sets	8 wks	Mon 7/15/13	Fri 9/6/13	8
2181	Data Collection Workbook - PharmNet Inpatient - Dose Range Checking or Bedrock: Multum Dose Range Checking Update	8 wks	Mon 7/15/13	Fri 9/6/13	8
2182	Data Collection Workbook - PharmNet Inpatient - Standard Rules	8 wks	Mon 7/15/13	Fri 9/6/13	8
2183	Data Collection Workbook - PharmNet Inpatient - Common Data Collection	8 wks	Mon 7/15/13	Fri 9/6/13	8
2184	Data Collection Workbook - PharmNet Inpatient - Therapeutic Substitutions	8 wks	Mon 7/15/13	Fri 9/6/13	8
2185	Data Collection Workbook - PharmNet Inpatient - Order Catalog Virtual View and Product Linking	8 wks	Mon 7/15/13	Fri 9/6/13	8
2186	**Task 5 Complete Partial System Build (BUILD)**	**34 wks**	**Mon 7/15/13**	**Fri 3/7/14**	
2187	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	34 wks	Mon 7/15/13	Fri 3/7/14	8
2188	Work Package: Physician Track - Physician PowerPlans	14 wks	Mon 9/9/13	Fri 12/13/13	2168,2167
2189	Work Package: Physician Track - Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
2190	Work Package: Discharge Process	14 wks	Mon 9/9/13	Fri 12/13/13	2169
2191	Work Package: Mpage Configuration	14 wks	Mon 7/15/13	Fri 10/18/13	8
2192	Work Package: Diagnosis and Problems Folder	14 wks	Mon 9/9/13	Fri 12/13/13	2171
2193	Work Package: PowerOrders - Orders	14 wks	Mon 9/9/13	Fri 12/13/13	2172
2194	Work Package: PowerOrders - Order Entry Formats	14 wks	Mon 9/9/13	Fri 12/13/13	2173
2195	Work Package: PowerOrders - Order Entry Fields	14 wks	Mon 9/9/13	Fri 12/13/13	2174
2196	Work Package: PowerOrders - Quick Order Folders	14 wks	Mon 12/2/13	Fri 3/7/14	2175
2197	Work Package: PowerOrders - Related Results	14 wks	Mon 12/2/13	Fri 3/7/14	2176
2198	Work Package: PowerOrders - Order Sentences	14 wks	Mon 12/2/13	Fri 3/7/14	2177
2199	Work Package: PharmNet Both - System Information	14 wks	Mon 7/15/13	Fri 10/18/13	8
2200	Work Package: PharmNet Both - eMAR Task Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2201	Work Package: PharmNet Both - Multum Content	14 wks	Mon 7/15/13	Fri 10/18/13	8
2202	Work Package: PharmNet Both - Route-Form Compatability	14 wks	Mon 7/15/13	Fri 10/18/13	8
2203	Work Package: PharmNet CPOE - CPOE Order Entry Format	14 wks	Mon 9/9/13	Fri 12/13/13	2178
2204	Work Package: PharmNet CPOE - CPOE Order Catalog Synonyms	14 wks	Mon 9/9/13	Fri 12/13/13	2179
2205	Work Package: PharmNet CPOE - Order Catalog Settings	14 wks	Mon 7/15/13	Fri 10/18/13	8
2206	Work Package: PharmNet CPOE - Template Non-Formulary/Patient Own Med	14 wks	Mon 7/15/13	Fri 10/18/13	8
2207	Work Package: PharmNet CPOE - Purge Job Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
2208	Work Package: PharmNet Both - CCL Customization of Standard Report Output	14 wks	Mon 7/15/13	Fri 10/18/13	8
2209	Work Package: PharmNet Both - CCL Customization of Label Output	14 wks	Mon 7/15/13	Fri 10/18/13	8
2210	Work Package: PharmNet CPOE - Dosing Parameters	14 wks	Mon 7/15/13	Fri 10/18/13	8
2211	Work Package: PharmNet CPOE - Preferences (Preferencemanager)	14 wks	Mon 7/15/13	Fri 10/18/13	8
2212	Work Package: PharmNet CPOE - Preferences for AV or Rx Bypass	14 wks	Mon 7/15/13	Fri 10/18/13	8
2213	Work Package: PharmNet CPOE - Preferences (Prefmaint)	14 wks	Mon 7/15/13	Fri 10/18/13	8
2214	Work Package: PharmNet Both - IV Sets	14 wks	Mon 9/9/13	Fri 12/13/13	2180
2215	Work Package: PharmNet Both - OrderSets / PowerPlans	14 wks	Mon 7/15/13	Fri 10/18/13	8
2216	Work Package: PharmNet Both - Compounds	14 wks	Mon 7/15/13	Fri 10/18/13	8
2217	Work Package: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for Order Catalog	14 wks	Mon 7/15/13	Fri 10/18/13	8
2218	Work Package: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for Formulary	14 wks	Mon 7/15/13	Fri 10/18/13	8
2219	Work Package: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for PowerPlans and CareSets	14 wks	Mon 7/15/13	Fri 10/18/13	8
2220	Work Package: PharmNet Both - Dose Range Checking	14 wks	Mon 9/9/13	Fri 12/13/13	2181
2221	Work Package: PharmNet CPOE - Integration: CareNet/eMAR	14 wks	Mon 7/15/13	Fri 10/18/13	8
2222	Work Package: PharmNet CPOE - Medication Request	14 wks	Mon 7/15/13	Fri 10/18/13	8
2223	Work Package: PharmNet CPOE - Charge on Administration	14 wks	Mon 7/15/13	Fri 10/18/13	8
2224	Work Package: PharmNet CPOE - NKA Functionality	14 wks	Mon 7/15/13	Fri 10/18/13	8
2225	Work Package: PharmNet CPOE - Clinical Documentation	14 wks	Mon 7/15/13	Fri 10/18/13	8
2226	Work Package: PharmNet Both - Clinical Alerts (Discern Rules)	14 wks	Mon 9/9/13	Fri 12/13/13	2182
2227	Work Package: PharmNet Both - Clinical Alerts (Multum)	14 wks	Mon 9/9/13	Fri 12/13/13	2183
2228	Work Package: PharmNet Both - Complex Medications	14 wks	Mon 7/15/13	Fri 10/18/13	8
2229	Work Package: PharmNet CPOE - Medication Reconciliation	14 wks	Mon 9/9/13	Fri 12/13/13	2183
2230	Work Package: PharmNet Both - Therapeutic Substitution	14 wks	Mon 9/9/13	Fri 12/13/13	2184

ID	Task Name	Duration	Start	Finish	Predecessors
2231	Work Package: PharmNet Both - Integration: Core Position and Privileges	14 wks	Mon 7/15/13	Fri 10/18/13	8
2232	Work Package: PharmNet Both - Prescription Writer	14 wks	Mon 7/15/13	Fri 10/18/13	8
2233	Work Package: PharmNet Both - Integration: Physician Track	14 wks	Mon 7/15/13	Fri 10/18/13	8
2234	Work Package: PharmNet Both - Integration: Point of Care	14 wks	Mon 9/9/13	Fri 12/13/13	2185
2235	Work Package: PharmNet Both - Charge Services - Testing and Auditing	14 wks	Mon 7/15/13	Fri 10/18/13	8
2236	Work Package: Zynx Initial Setup	1 wk	Mon 7/15/13	Fri 7/19/13	8
2237	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	2234
2238	**Task 6 Conduct System Validation**	**13 wks**	**Mon 12/16/13**	**Fri 3/14/14**	
2239	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
2240	Subtask 6.2 Conduct System Validation Session Follow-up	3 mons	Mon 12/23/13	Fri 3/14/14	2239
2241	**Task 7 Complete Build of Order Management, CPOE and Decision Support and Conduct Unit and System Testing (TEST)**	**69.2 wks**	**Fri 12/21/12**	**Fri 4/18/14**	
2242	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	2237
2243	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	2242
2244	**Quality Center Testing**	**66.2 wks**	**Fri 12/21/12**	**Fri 3/28/14**	
2245	QC Test: PowerOrders - Orders	3 wks	Mon 12/16/13	Fri 1/3/14	2193
2246	QC Test: PowerOrders - Quick Order Folders	3 wks	Mon 3/10/14	Fri 3/28/14	2196
2247	QC Test: PowerOrders - Related Results	3 wks	Mon 3/10/14	Fri 3/28/14	2197
2248	QC Test: PharmNet CPOE - Purge Job Build	14 wks	Mon 10/21/13	Fri 1/24/14	2207
2249	QC Test: PharmNet Both - CCL Customization of Standard Report Output	14 wks	Mon 10/21/13	Fri 1/24/14	2208
2250	QC Test: PharmNet Both - IV Sets	14 wks	Mon 12/16/13	Fri 3/21/14	2214
2251	QC Test: PharmNet Both - OrderSets / PowerPlans	14 wks	Mon 10/21/13	Fri 1/24/14	2215
2252	QC Test: PharmNet Both - Compounds	14 wks	Mon 10/21/13	Fri 1/24/14	2216
2253	QC Test: PharmNet CPOE - Medication Reconciliation	14 wks	Fri 12/21/12	Thu 3/28/13	
2254	**Unit Testing**	**69.2 wks**	**Fri 12/21/12**	**Fri 4/18/14**	
2255	Localize Unit Test Scripts - CPOE	5 wks	Mon 12/16/13	Fri 1/17/14	11
2256	Unit Test Scripts - CPOE	3 wks	Mon 1/20/14	Fri 2/7/14	2255
2257	Unit Test: Physician Track - Physician PowerPlans	3 wks	Mon 2/10/14	Fri 2/28/14	2188,2256
2258	Unit Test: Physician Track - Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2189,2256
2259	Unit Test: Depart Process	3 wks	Mon 2/10/14	Fri 2/28/14	2190,2256
2260	Unit Test: Mpage Configuration	3 wks	Mon 2/10/14	Fri 2/28/14	2191,2256
2261	Unit Test: Diagnosis and Problems Folder	3 wks	Mon 2/10/14	Fri 2/28/14	2256,2192

ID	Task Name	Duration	Start	Finish	Predecessors
2262	Localize Unit Test Scripts - CPOE,Orders	5 wks	Mon 12/16/13	Fri 1/17/14	11
2263	Unit Test Scripts - CPOE,Orders	3 wks	Mon 1/20/14	Fri 2/7/14	2262
2264	Unit Test: PowerOrders - Orders	3 wks	Mon 2/10/14	Fri 2/28/14	2263,2245,2193
2265	Unit Test: PowerOrders - Order Entry Formats	3 wks	Mon 2/10/14	Fri 2/28/14	2263,2194
2266	Unit Test: PowerOrders - Order Entry Fields	3 wks	Mon 2/10/14	Fri 2/28/14	2263,2195
2267	Unit Test: PowerOrders - Quick Order Folders	3 wks	Mon 3/31/14	Fri 4/18/14	2263,2246,2196
2268	Unit Test: PowerOrders - Related Results	3 wks	Mon 3/31/14	Fri 4/18/14	2263,2247,2197
2269	Unit Test: PowerOrders - Order Sentences	3 wks	Mon 3/10/14	Fri 3/28/14	2263,2198
2270	Localize Unit Test Scripts - CPOE,PharmNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2271	Unit Test Scripts - CPOE,PharmNet	3 wks	Mon 1/20/14	Fri 2/7/14	2270
2272	Unit Test: PharmNet Both - System Information	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2199
2273	Unit Test: PharmNet Both - eMAR Task Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2200
2274	Unit Test: PharmNet Both - Multum Content	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2201
2275	Unit Test: PharmNet Both - Route-Form Compatability	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2202
2276	Unit Test: PharmNet CPOE - CPOE Order Entry Format	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2203
2277	Unit Test: PharmNet CPOE - CPOE Order Catalog Synonyms	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2204
2278	Unit Test: PharmNet CPOE - Order Catalog Settings	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2205
2279	Unit Test: PharmNet CPOE - Template Non-Formulary/Patient Own Med	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2206
2280	Unit Test: PharmNet CPOE - Purge Job Build	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2207
2281	Unit Test: PharmNet Both - CCL Customization of Standard Report Output	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2208
2282	Unit Test: PharmNet Both - CCL Customization of Label Output	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2209
2283	Unit Test: PharmNet CPOE - Dosing Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2210
2284	Unit Test: PharmNet CPOE - Preferences (Preferencemanager)	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2211
2285	Unit Test: PharmNet CPOE - Preferences for AV or Rx Bypass	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2212
2286	Unit Test: PharmNet CPOE - Preferences (Prefmaint)	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2213
2287	Unit Test: PharmNet Both - IV Sets	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2214
2288	Unit Test: PharmNet Both - OrderSets / PowerPlans	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2215
2289	Unit Test: PharmNet Both - Compounds	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2216
2290	Unit Test: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for Order Catalog	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2217
2291	Unit Test: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for Formulary	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2218
2292	Unit Test: PharmNet CPOE - ASC_CPOE_UTILITIES Audits for PowerPlans and CareSets	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2219

ID	Task Name	Duration	Start	Finish	Predecessors
2293	Unit Test: PharmNet Both - Dose Range Checking	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2220
2294	Unit Test: PharmNet CPOE - Integration: CareNet/eMAR	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2221
2295	Unit Test: PharmNet CPOE - Medication Request	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2222
2296	Unit Test: PharmNet CPOE - Charge on Administration	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2223
2297	Unit Test: PharmNet CPOE - NKA Functionality	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2224
2298	Unit Test: PharmNet CPOE - Clinical Documentation	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2225
2299	Unit Test: PharmNet Both - Clinical Alerts (Discern Rules)	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2226
2300	Unit Test: PharmNet Both - Clinical Alerts (Multum)	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2227
2301	Unit Test: PharmNet Both - Complex Medications	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2228
2302	Unit Test: PharmNet CPOE - Medication Reconciliation	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2229
2303	Unit Test: PharmNet Both - Therapeutic Substitution	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2230
2304	Unit Test: PharmNet Both - Integration: Core Position and Privileges	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2231
2305	Unit Test: PharmNet Both - Prescription Writer	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2232
2306	Unit Test: PharmNet Both - Integration: Physician Track	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2233
2307	Unit Test: PharmNet Both - Integration: Point of Care	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2234
2308	Unit Test: PharmNet Both - Charge Services - Testing and Auditing	3 wks	Mon 2/10/14	Fri 2/28/14	2271,2235
2309	Unit Test: Zynx import from Authorspace	3 wks	Fri 12/21/12	Thu 1/10/13	
2310	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2311	Localize System Test Tracking and Scripts - CPOE	1 wk	Mon 12/16/13	Fri 12/20/13	11
2312	First Draft System Test Scripts - CPOE	2 wks	Mon 12/23/13	Fri 1/3/14	2311
2313	Final System Test Scripts - CPOE	2 wks	Mon 12/23/13	Fri 1/3/14	2311
2314	Complete System Testing - CPOE	3 wks	Mon 1/6/14	Fri 1/24/14	2313
2315	Localize System Test Tracking and Scripts - CPOE,Orders	1 wk	Mon 12/16/13	Fri 12/20/13	11
2316	First Draft System Test Scripts - CPOE,Orders	2 wks	Mon 12/23/13	Fri 1/3/14	2315
2317	Final System Test Scripts - CPOE,Orders	2 wks	Mon 12/23/13	Fri 1/3/14	2315
2318	Complete System Testing - CPOE,Orders	3 wks	Mon 1/6/14	Fri 1/24/14	2317
2319	Localize System Test Tracking and Scripts - CPOE,PharmNet	1 wk	Mon 12/16/13	Fri 12/20/13	11
2320	First Draft System Test Scripts - CPOE,PharmNet	2 wks	Mon 12/23/13	Fri 1/3/14	2319
2321	Final System Test Scripts - CPOE,PharmNet	2 wks	Mon 12/23/13	Fri 1/3/14	2319
2322	Complete System Testing - CPOE,PharmNet	3 wks	Mon 1/6/14	Fri 1/24/14	2321
2323	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2324	Integration Test Scripts - CPOE	5 wks	Mon 12/16/13	Fri 1/17/14	11
2325	Complete Integration Testing - CPOE	5 wks	Mon 1/20/14	Fri 2/21/14	2324

ID	Task Name	Duration	Start	Finish	Predecessors
2326	Integration Test Scripts - CPOE,Orders	5 wks	Mon 12/16/13	Fri 1/17/14	11
2327	Complete Integration Testing - CPOE,Orders	5 wks	Mon 1/20/14	Fri 2/21/14	2326
2328	Integration Test Scripts - CPOE,PharmNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2329	Complete Integration Testing - CPOE,PharmNet	5 wks	Mon 1/20/14	Fri 2/21/14	2328
2330	Milestone: Conclude All Testing - CPOE	0 days	Fri 2/28/14	Fri 2/28/14	2325,2314,2257,2258,
2331	Milestone: Conclude All Testing - CPOE,Orders	0 days	Fri 4/18/14	Fri 4/18/14	2327,2318,2262,2263,
2332	Milestone: Conclude All Testing - CPOE,PharmNet	0 days	Fri 2/28/14	Fri 2/28/14	2272,2273,2274,2275,
2333	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	2332FS-1 day
2334	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2335	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2336	Conversion Readiness Assessment - Physician Track	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2337	Conversion Readiness Assessment - CPOE,Orders	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2338	Review & Update Conversion Cutover Plan (sent by IA) - CPOE,Orders	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2339	Complete the Turnover Process documentation- CPOE,Orders	5 wks	Mon 6/30/14	Fri 8/1/14	18
2340	Build order favorite folders and content for each physician	2 wks	Mon 6/2/14	Fri 6/13/14	18SS-3 wks
2341	Conversion Readiness Assessment - CPOE,PharmNet	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2342	Review & Update Conversion Cutover Plan (sent by IA) - CPOE,PharmNet	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2343	Complete the Turnover Process documentation- CPOE,PharmNet	5 wks	Mon 6/30/14	Fri 8/1/14	18
2344	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2345	Complete Post Conversion Assessment Workbook for CPOE,Orders	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2346	Complete Post Conversion Assessment Workbook for CPOE,Orders	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2347	**ePrescribe**	**73 wks**	**Fri 4/26/13**	**Fri 9/19/14**	
2348	**DESIGN**	**19 wks**	**Fri 4/26/13**	**Fri 9/6/13**	
2349	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
2350	Conduct Open House Demo Session - ePrescribe	1 wk	Mon 5/20/13	Fri 5/24/13	7
2351	Complete Open House Scripts - ePrescribe	4 wks	Fri 4/26/13	Fri 5/24/13	5
2352	Onsite Workflow Assessment - ePrescribe	1 wk	Mon 5/20/13	Fri 5/24/13	7
2353	Complete ePrescribe WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2354	Complete Call with Hub and Client	1 day	Mon 4/29/13	Mon 4/29/13	5
2355	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
2356	Data Collection Workbook - ePrescribing	8 wks	Mon 7/15/13	Fri 9/6/13	8
2357	DDM - ePrescribing	8 wks	Mon 7/15/13	Fri 9/6/13	8
2358	Data Collection Workbook - Providers	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2359	**BUILD**	**39 wks**	**Mon 7/15/13**	**Fri 4/11/14**	
2360	Work Package: ePrescribe Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2356,2357
2361	Work Package: Service Requests for Hub team for non-prod	14 wks	Mon 7/15/13	Fri 10/18/13	8
2362	Work Package: Order Entry format and aliasing	14 wks	Mon 7/15/13	Fri 10/18/13	8
2363	Work Package: Non prod interfaces	14 wks	Mon 7/15/13	Fri 10/18/13	8
2364	Work Package: Message Center Pools	14 wks	Mon 7/15/13	Fri 10/18/13	8
2365	Work Package: Providers	14 wks	Mon 9/9/13	Fri 12/13/13	2358
2366	**RDDS - 1st Move**	**4 wks**	**Mon 3/17/14**	**Fri 4/11/14**	
2367	Validate RDDS move using RDDS workbook (if applicable) - ePrescribe	1 wk	Mon 3/17/14	Fri 3/21/14	13
2368	Manually Rebuild Items Not Moved by RDDS - ePrescribe	3 wks	Mon 3/24/14	Fri 4/11/14	2367
2369	**TEST**	**18 wks**	**Mon 10/21/13**	**Fri 2/21/14**	
2370	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
2371	QC Test: ePrescribe	3 wks	Mon 12/16/13	Fri 1/3/14	2360,2361,2362,2363,
2372	**Unit Testing**	**16 wks**	**Mon 10/21/13**	**Fri 2/7/14**	
2373	Localize Unit Test Scripts - ePrescribe	5 wks	Mon 12/16/13	Fri 1/17/14	11
2374	Unit Test Scripts - ePrescribe	3 wks	Mon 1/20/14	Fri 2/7/14	2373
2375	Unit Test: ePrescribe Preferences	15 days	Mon 12/16/13	Fri 1/3/14	2360
2376	Unit Test: Service Requests for Hub team for non-prod	15 days	Mon 10/21/13	Fri 11/8/13	2361
2377	Unit Test: Order Entry format and aliasing	15 days	Mon 10/21/13	Fri 11/8/13	2362
2378	Unit Test: Non prod interfaces	15 days	Mon 10/21/13	Fri 11/8/13	2363
2379	Unit Test: Message Center Pools	15 days	Mon 10/21/13	Fri 11/8/13	2364
2380	Unit Test: Providers	15 days	Mon 12/16/13	Fri 1/3/14	2365
2381	Unit Test: Non-prod Connectivity Testing	15 days	Mon 12/16/13	Fri 1/3/14	11
2382	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2383	Localize System Test Tracking and Scripts - ePrescribe	1 wk	Mon 12/16/13	Fri 12/20/13	11
2384	First Draft System Test Scripts - ePrescribe	2 wks	Mon 12/23/13	Fri 1/3/14	2383
2385	Final System Test Scripts - ePrescribe	2 wks	Mon 12/23/13	Fri 1/3/14	2383
2386	Complete System Testing - ePrescribe	3 wks	Mon 1/6/14	Fri 1/24/14	2385
2387	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2388	Integration Test Scripts - ePrescribe	5 wks	Mon 12/16/13	Fri 1/17/14	11
2389	Complete Integration Testing - ePrescribe	5 wks	Mon 1/20/14	Fri 2/21/14	2388
2390	Milestone: Conclude All Testing - ePrescribe	0 days	Fri 2/21/14	Fri 2/21/14	2375,2386,2389,2376,
2391	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
2392	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2393	Conversion Readiness Assessment - ePrescribe	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2394	Complete Connectivity Testing in PROD	3 wks	Mon 4/21/14	Fri 5/9/14	14
2395	Conduct/Support Pilot Conversion	3 wks	Mon 4/21/14	Fri 5/9/14	14
2396	Review & Update Conversion Cutover Plan (sent by IA) - ePrescribe	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2397	Complete the Turnover Process documentation- ePrescribe	5 wks	Mon 6/30/14	Fri 8/1/14	18
2398	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2399	Complete Post Conversion Assessment Workbook for ePrescribe	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2400	**SOW #14 - Emergency Department (FirstNet)**	**98 wks**	**Mon 12/24/12**	**Fri 11/7/14**	
2401	**Task 1 Conduct SOW Kick-off/ Mobilization**	**22 wks**	**Mon 12/24/12**	**Fri 5/24/13**	
2402	Subtask 1.1 Develop detailed Sub-Project Work Plan - Emergency Department	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
2403	Subtask 1.2 Conduct Initiation session for Emergency Department Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
2404	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	7
2405	**DESIGN**	**31 wks**	**Fri 4/26/13**	**Fri 11/29/13**	
2406	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**8 wks**	**Fri 4/26/13**	**Fri 6/21/13**	
2407	Engage Lynx Resources for eCode	1 wk	Mon 4/29/13	Fri 5/3/13	5
2408	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
2409	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - FirstNet)	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
2410	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/17/13	Fri 6/21/13	2409FS+4 wks
2411	Complete PowerNote 2G WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2412	Complete FirstNet Unit Secretary WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2413	Complete FirstNet Physician WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2414	Complete FirstNet Nurse WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2415	Complete FirstNet WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2416	Complete Facility Charge Ticket WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2417	Complete Open House Scripts - FirstNet	4 wks	Fri 4/26/13	Fri 5/24/13	5
2418	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
2419	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2420	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	2419
2421	**Task 4 Conduct Design Review**	**9 wks**	**Mon 9/30/13**	**Fri 11/29/13**	
2422	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
2423	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/28/13	Fri 11/1/13	2422FS+3 wks
2424	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/28/13	Fri 11/1/13	2422FS+3 wks
2425	Subtask 4.4 Conduct Emergency Department Workflow Workshop	1 wk	Mon 10/28/13	Fri 11/1/13	2422FS+3 wks
2426	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/25/13	Fri 11/29/13	2425FS+3 wks
2427	**Data Collection / BedRock**	**20 wks**	**Mon 7/15/13**	**Fri 11/29/13**	
2428	Data Collection Workbook - eCode ED Coding	8 wks	Mon 10/7/13	Fri 11/29/13	9
2429	Data Collection Workbook - FirstNet > Document Event Association tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2430	Data Collection Workbook - FirstNet > Events tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2431	Data Collection Workbook - FirstNet > Facility Charge Ticket	8 wks	Mon 10/7/13	Fri 11/29/13	9
2432	Data Collection Workbook - FirstNet > Location Views	8 wks	Mon 7/15/13	Fri 9/6/13	8
2433	Data Collection Workbook - FirstNet > Locations tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2434	Data Collection Workbook - FirstNet > Reason for Visit tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2435	Data Collection Workbook - FirstNet > Tracking Lists per Position tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2436	FirstNet Interactive View: Bands, Sections, DTAs, Includes/Excludes, Default Opens	8 wks	Mon 7/15/13	Fri 9/6/13	8
2437	Data Collection Workbook - All DTA's > Conditional Logic Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2438	Data Collection Workbook - FirstNet > Data Table tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
2439	Data Collection Workbook - Core Security > FirstNet Positions	8 wks	Mon 7/15/13	Fri 9/6/13	8
2440	Data Collection Workbook - FirstNet > Tracking List tab, Tracking List per position tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2441	Data Collection Workbook - FirstNet > Depart Process tab, Clinical Summary tab, Patient Summary tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2442	Data Collection Workbook - FirstNet > Pre-Arrival Form tab, Pre-Arrival Template tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2443	Data Collection Workbook - FirstNet > Discern Reports tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2444	Data Collection Workbook - FirstNet > Set Triggers tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2445	Data Collection Workbook - FirstNet > Quick Flowsheet tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2446	Data Collection Workbook - FirstNet > Order Event Association tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2447	Data Collection Workbook - FirstNet > MOEW tab, Prescription Favorites tab	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2448	**Task 5 Complete Partial System Build (BUILD)**	**34 wks**	**Mon 7/15/13**	**Fri 3/7/14**	
2449	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
2450	Work Package: FirstNet - eCode ED Coding	14 wks	Mon 12/2/13	Fri 3/7/14	2428
2451	Work Package: FirstNet - Document Event Association	14 wks	Mon 9/9/13	Fri 12/13/13	2429
2452	Work Package: FirstNet - Events	14 wks	Mon 9/9/13	Fri 12/13/13	2430
2453	Work Package: FirstNet - Location Views	14 wks	Mon 9/9/13	Fri 12/13/13	2432
2454	Work Package: FirstNet - Locations	14 wks	Mon 9/9/13	Fri 12/13/13	2433
2455	Work Package: FirstNet - Reason For Visit	14 wks	Mon 9/9/13	Fri 12/13/13	2434
2456	Work Package: First Net - Tabs by Position (Tracking Lists by Position tab)	14 wks	Mon 9/9/13	Fri 12/13/13	2435
2457	Work Package: FirstNet - Interactive View	14 wks	Mon 9/9/13	Fri 12/13/13	2436,2437
2458	Work Package: FirstNet - PowerNoteED	14 wks	Mon 7/15/13	Fri 10/18/13	8
2459	Work Package: FirstNet - Facility Charge Ticket	14 wks	Mon 12/2/13	Fri 3/7/14	2431
2460	Work Package: FirstNet - Patient Education	14 wks	Mon 7/15/13	Fri 10/18/13	8
2461	Work Package: FirstNet - Data Tables	14 wks	Mon 9/9/13	Fri 12/13/13	2438
2462	Work Package: FirstNet - ED Summary Mpage	14 wks	Mon 7/15/13	Fri 10/18/13	8
2463	Work Package: FirstNet - Security	14 wks	Mon 9/9/13	Fri 12/13/13	2439
2464	Work Package: FirstNet - Tracking Lists	14 wks	Mon 9/9/13	Fri 12/13/13	2440
2465	Work Package: FirstNet - Depart Process	14 wks	Mon 9/9/13	Fri 12/13/13	2441
2466	Work Package: FirstNet - Documentation	14 wks	Mon 7/15/13	Fri 10/18/13	8
2467	Work Package: FirstNet - Downtime Application	14 wks	Mon 7/15/13	Fri 10/18/13	8
2468	Work Package: FirstNet - Pre-Arrival	14 wks	Mon 9/9/13	Fri 12/13/13	2442
2469	Work Package: FirstNet - Reports	14 wks	Mon 9/9/13	Fri 12/13/13	2443
2470	Work Package: FirstNet - Triggers	14 wks	Mon 9/9/13	Fri 12/13/13	2444
2471	Work Package: FirstNet - Optimization	14 wks	Mon 7/15/13	Fri 10/18/13	8
2472	Work Package: FirstNet - Flowsheets	14 wks	Mon 9/9/13	Fri 12/13/13	2445
2473	Work Package: FirstNet - Order Event Association	14 wks	Mon 9/9/13	Fri 12/13/13	2446
2474	Work Package: FirstNet - Orders	14 wks	Mon 9/9/13	Fri 12/13/13	2447
2475	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 3/7/14	Fri 3/7/14	2459
2476	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/16/13**	**Fri 1/17/14**	
2477	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
2478	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/23/13	Fri 1/17/14	2477

ID	Task Name	Duration	Start	Finish	Predecessors
2479	**Task 7 Complete Build of Emergency Department and Conduct Unit and System Testing (TEST)**	**26 wks**	**Mon 10/21/13**	**Fri 4/18/14**	
2480	Subtask 7.1 Complete System Build	0 days	Fri 3/7/14	Fri 3/7/14	2475
2481	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	1.5 mons	Mon 3/10/14	Fri 4/18/14	2480
2482	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
2483	QC Test: FirstNet - Document Event Association	3 wks	Mon 12/16/13	Fri 1/3/14	2451
2484	QC Test: FirstNet - Events	3 wks	Mon 12/16/13	Fri 1/3/14	2452
2485	QC Test: FirstNet - Location Views	3 wks	Mon 12/16/13	Fri 1/3/14	2453
2486	QC Test: FirstNet - Locations	3 wks	Mon 12/16/13	Fri 1/3/14	2454
2487	QC Test: FirstNet - Reason For Visit	3 wks	Mon 12/16/13	Fri 1/3/14	2455
2488	QC Test: First Net - Tabs by Position (Tracking Lists by Position tab)	3 wks	Mon 12/16/13	Fri 1/3/14	2456
2489	QC Test: FirstNet - Interactive View	3 wks	Mon 12/16/13	Fri 1/3/14	2457
2490	QC Test: FirstNet - Tracking Lists	3 wks	Mon 12/16/13	Fri 1/3/14	2464
2491	QC Test: FirstNet - Depart Process	3 wks	Mon 12/16/13	Fri 1/3/14	2465
2492	QC Test: FirstNet - Optimization	3 wks	Mon 10/21/13	Fri 11/8/13	2471
2493	**Unit Testing**	**26 wks**	**Mon 10/21/13**	**Fri 4/18/14**	
2494	Localize Unit Test Scripts - FirstNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2495	Unit Test Scripts - FirstNet	3 wks	Mon 3/10/14	Fri 3/28/14	2494,2450
2496	Unit Test: FirstNet - Document Event Association	3 wks	Mon 3/31/14	Fri 4/18/14	2451,2495,2483
2497	Unit Test: FirstNet - Events	3 wks	Mon 3/31/14	Fri 4/18/14	2452,2495,2484
2498	Unit Test: FirstNet - Location Views	3 wks	Mon 3/31/14	Fri 4/18/14	2453,2495,2485
2499	Unit Test: FirstNet - Locations	3 wks	Mon 3/31/14	Fri 4/18/14	2454,2495,2486
2500	Unit Test: FirstNet - Reason For Visit	3 wks	Mon 3/31/14	Fri 4/18/14	2455,2495,2487
2501	Unit Test: First Net - Tabs by Position (Tracking Lists by Position tab)	3 wks	Mon 3/31/14	Fri 4/18/14	2456,2495,2488
2502	Unit Test: FirstNet - Interactive View	3 wks	Mon 3/31/14	Fri 4/18/14	2457,2495,2489
2503	Unit Test: FirstNet - PowerNoteED	3 wks	Mon 10/21/13	Fri 11/8/13	2458
2504	Unit Test: FirstNet - Facility Charge Ticket	3 wks	Mon 3/10/14	Fri 3/28/14	2459
2505	Unit Test: FirstNet - Patient Education	3 wks	Mon 10/21/13	Fri 11/8/13	2460
2506	Unit Test: FirstNet - Data Tables	3 wks	Mon 12/16/13	Fri 1/3/14	2461
2507	Unit Test: FirstNet - ED Summary Mpage	3 wks	Mon 10/21/13	Fri 11/8/13	2462
2508	Unit Test: FirstNet - Security	3 wks	Mon 12/16/13	Fri 1/3/14	2463
2509	Unit Test: FirstNet - Tracking Lists	3 wks	Mon 1/6/14	Fri 1/24/14	2464,2490

ID	Task Name	Duration	Start	Finish	Predecessors
2510	Unit Test: FirstNet - Depart Process	3 wks	Mon 1/6/14	Fri 1/24/14	2465,2491
2511	Unit Test: FirstNet - Documentation	3 wks	Mon 10/21/13	Fri 11/8/13	2466
2512	Unit Test: FirstNet - Downtime Application	3 wks	Mon 10/21/13	Fri 11/8/13	2467
2513	Unit Test: FirstNet - Pre-Arrival	3 wks	Mon 12/16/13	Fri 1/3/14	2468
2514	Unit Test: FirstNet - Reports	3 wks	Mon 12/16/13	Fri 1/3/14	2469
2515	Unit Test: FirstNet - Triggers	3 wks	Mon 12/16/13	Fri 1/3/14	2470
2516	Unit Test: FirstNet - Optimization	3 wks	Mon 11/11/13	Fri 11/29/13	2471,2492
2517	Unit Test: FirstNet - Flowsheets	3 wks	Mon 12/16/13	Fri 1/3/14	2472
2518	Unit Test: FirstNet - Order Event Association	3 wks	Mon 12/16/13	Fri 1/3/14	2473
2519	Unit Test: FirstNet - Orders	3 wks	Mon 12/16/13	Fri 1/3/14	2474
2520	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2521	Localize System Test Tracking and Scripts - FirstNet	1 wk	Mon 12/16/13	Fri 12/20/13	11
2522	First Draft System Test Scripts - FirstNet	2 wks	Mon 12/23/13	Fri 1/3/14	2521
2523	Final System Test Scripts - FirstNet	2 wks	Mon 12/23/13	Fri 1/3/14	2521
2524	Complete System Testing - FirstNet	3 wks	Mon 1/6/14	Fri 1/24/14	2523
2525	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2526	Integration Test Scripts - FirstNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2527	Complete Integration Testing - FirstNet	5 wks	Mon 1/20/14	Fri 2/21/14	2526
2528	Milestone: Conclude All Testing - FirstNet	0 days	Fri 4/18/14	Fri 4/18/14	2496,2497,2498,2499,
2529	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 4/18/14	Fri 4/18/14	2528FS-1 day
2530	**CONVERSION**	**39 wks**	**Mon 2/10/14**	**Fri 11/7/14**	
2531	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2532	Conversion Readiness Assessment - FirstNet	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2533	Review & Update Conversion Cutover Plan (sent by IA) - FirstNet	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2534	Complete the Turnover Process documentation- FirstNet	5 wks	Mon 6/30/14	Fri 8/1/14	18
2535	**Post Conversion Assessment**	**13 wks**	**Mon 8/11/14**	**Fri 11/7/14**	
2536	Complete Post Conversion Assessment Workbook for FirstNet	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2537	Complete 30 Day Post Go Live Audit for Facility Charge Ticket	1 wk	Mon 8/11/14	Fri 8/15/14	18FS+30 days
2538	Complete 90 Day Post Go Live Audit for Facility Charge Ticket	1 wk	Mon 11/3/14	Fri 11/7/14	18FS+90 days
2539	**SOW #13 - Intensive Care Unit (INet / Iview)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
2540	**Task 1 Conduct SOW Kick-off/ Mobilization**	**22 wks**	**Mon 12/24/12**	**Fri 5/24/13**	
2541	Subtask 1.1 Develop detailed Sub-Project Work Plan - Intensive Care Unit	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
2542	Subtask 1.2 Conduct Initiation session for Intensive Care Unit Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
2543	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	7
2544	**DESIGN**	**40 wks**	**Fri 4/26/13**	**Fri 1/31/14**	
2545	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**8 wks**	**Fri 4/26/13**	**Fri 6/21/13**	
2546	Conduct Open House Demo Session - INet,IView	1 wk	Mon 4/29/13	Fri 5/3/13	5
2547	Complete Open House Scripts - INet,IView	4 wks	Fri 4/26/13	Fri 5/24/13	5
2548	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
2549	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - INet,Iview)	1 wk	Mon 5/20/13	Fri 5/24/13	7
2550	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/17/13	Fri 6/21/13	2549FS+3 wks
2551	Complete HIM WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2552	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
2553	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
2554	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	2553
2555	**Task 4 Conduct Design Review**	**17 wks**	**Mon 10/7/13**	**Fri 1/31/14**	
2556	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
2557	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 1/27/14	Fri 1/31/14	2924
2558	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/14/13	Fri 10/18/13	2556
2559	Subtask 4.4 Conduct Intensive Care Unit Workflow Workshop	1 wk	Mon 10/21/13	Fri 10/25/13	2558
2560	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/25/13	Fri 11/29/13	2559FS+4 wks
2561	**Data Collection**	**20 wks**	**Mon 7/15/13**	**Fri 11/29/13**	
2562	Data Collection Workbook - Interactive View Position Location	8 wks	Mon 10/7/13	Fri 11/29/13	9
2563	Data Collection Workbook - INet® Interactive View Titrations	8 wks	Mon 10/7/13	Fri 11/29/13	9
2564	Data Collection Workbook - Interactive View (Bands, Sections, DTAs, Includes/Excludes, Default Opens)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2565	Data Collection Workbook - All DTA's is the DCW for Conditional Logic	8 wks	Mon 7/15/13	Fri 9/6/13	8
2566	Data Collection Workbook - INet® Advanced Graphing	8 wks	Mon 10/7/13	Fri 11/29/13	9
2567	BedRock > IView Preferences	8 wks	Mon 10/7/13	Fri 11/29/13	9
2568	BedRock > MPages (ICU Summary)	8 wks	Mon 10/7/13	Fri 11/29/13	9
2569	**Task 5 Complete Partial System Build (BUILD)**	**26 wks**	**Mon 9/9/13**	**Fri 3/7/14**	
2570	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 9/9/13	Fri 12/13/13	2565

ID	Task Name	Duration	Start	Finish	Predecessors
2571	Work Package: INet - Position and Position-Location build and sequencing	14 wks	Mon 12/2/13	Fri 3/7/14	2562
2572	Work Package: INet - Marking orderable synonyms as titrateable meds	14 wks	Mon 12/2/13	Fri 3/7/14	2563
2573	Work Package: INet - Interactive View	14 wks	Mon 9/9/13	Fri 12/13/13	2564
2574	Work Package: INet - Interactive View Conditional Logic	14 wks	Mon 9/9/13	Fri 12/13/13	2565
2575	Work Package: INet - Advanced Graphing	14 wks	Mon 12/2/13	Fri 3/7/14	2566
2576	Work Package: INet - Preferences	14 wks	Mon 12/2/13	Fri 3/7/14	2567
2577	Work Package: INet - MPages (ICU Summary)	14 wks	Mon 12/2/13	Fri 3/7/14	2568
2578	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 3/7/14	Fri 3/7/14	2577
2579	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/16/13**	**Fri 1/17/14**	
2580	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
2581	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/23/13	Fri 1/17/14	2580
2582	**Task 7 Complete Build of Intensive Care Unit and Conduct Unit and System Testing (TEST)**	**18 wks**	**Mon 12/16/13**	**Fri 4/18/14**	
2583	Subtask 7.1 Complete System Build	0 days	Fri 3/7/14	Fri 3/7/14	2578
2584	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	1.5 mons	Mon 3/10/14	Fri 4/18/14	2583
2585	**Quality Center Testing**	**15 wks**	**Mon 12/16/13**	**Fri 3/28/14**	
2586	QC Test: INet - Position and Position-Location build and sequencing	3 wks	Mon 3/10/14	Fri 3/28/14	2571
2587	QC Test: INet - Marking orderable synonyms as titrateable meds	3 wks	Mon 3/10/14	Fri 3/28/14	2572
2588	QC Test: INet - Interactive View	3 wks	Mon 12/16/13	Fri 1/3/14	2573
2589	**Unit Testing**	**18 wks**	**Mon 12/16/13**	**Fri 4/18/14**	
2590	Localize Unit Test Scripts - INet	5 wks	Mon 12/16/13	Fri 1/17/14	11
2591	Unit Test Scripts - INet	3 wks	Mon 1/20/14	Fri 2/7/14	2590
2592	Unit Test:INet - Position and Position-Location build and sequencing	3 wks	Mon 3/31/14	Fri 4/18/14	2571,2591,2586
2593	Unit Test:INet - Marking orderable synonyms as titrateable meds	3 wks	Mon 3/31/14	Fri 4/18/14	2572,2591,2587
2594	Unit Test:INet - Interactive View	3 wks	Mon 2/10/14	Fri 2/28/14	2573,2591,2588
2595	Unit Test:INet - Interactive View Conditional Logic	3 wks	Mon 2/10/14	Fri 2/28/14	2574,2591
2596	Unit Test: INet - Advanced Graphing	3 wks	Mon 3/10/14	Fri 3/28/14	2575,2591
2597	Unit Test: INet - Preferences	3 wks	Mon 3/10/14	Fri 3/28/14	2591,2576
2598	Unit Test: INet - MPages (ICU Summary)	3 wks	Mon 3/10/14	Fri 3/28/14	2591,2577
2599	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2600	Localize System Test Tracking and Scripts - INet,IView	1 wk	Mon 12/16/13	Fri 12/20/13	11
2601	First Draft System Test Scripts - INet,IView	2 wks	Mon 12/23/13	Fri 1/3/14	2600

ID	Task Name	Duration	Start	Finish	Predecessors
2602	Final System Test Scripts - INet,IView	2 wks	Mon 12/23/13	Fri 1/3/14	2600
2603	Complete System Testing - INet,IView	3 wks	Mon 1/6/14	Fri 1/24/14	2602
2604	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2605	Integration Test Scripts - INet,IView	5 wks	Mon 12/16/13	Fri 1/17/14	11
2606	Complete Integration Testing - INet,IView	5 wks	Mon 1/20/14	Fri 2/21/14	2605
2607	Milestone: Conclude All Testing - INet,IView	0 days	Fri 4/18/14	Fri 4/18/14	2592,2593,2594,2595,
2608	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 4/18/14	Fri 4/18/14	2607FS-1 day
2609	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2610	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2611	Conversion Readiness Assessment - INet,IView	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2612	Review & Update Conversion Cutover Plan (sent by IA) - INet,IView	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2613	Complete the Turnover Process documentation- INet,IView	5 wks	Mon 6/30/14	Fri 8/1/14	18
2614	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2615	Complete Post Conversion Assessment Workbook for INet,IView	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2616	**PowerChart Ambulatory**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
2617	**DESIGN**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
2618	**Establish Context for Design**	**4 wks**	**Mon 4/22/13**	**Fri 5/17/13**	
2619	Conduct Open House Demo Session - PowerChart Ambulatory	1 wk	Mon 4/22/13	Fri 4/26/13	5SS
2620	Onsite Workflow Assessment - PowerChart Ambulatory	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
2621	Complete PowerChart Ambulatory WBT	1 day	Mon 4/22/13	Mon 4/22/13	5SS
2622	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
2623	Data Collection Workbook - Project Start Up - Ambulatory	8 wks	Mon 12/31/12	Fri 2/22/13	2
2624	Data Collection Workbook - PowerChart Office®>Nomenclature tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2625	Data Collection Workbook - PowerChart Office® > Family History Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2626	Data Collection Workbook - PowerChart Office® > Immun Sched and Health Maint Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2627	Data Collection Workbook - Core Systems Security	8 wks	Mon 7/15/13	Fri 9/6/13	8
2628	Data Collection Workbook- Acute Care PowerOrders Care Doc Adhoc Folders	8 wks	Mon 7/15/13	Fri 9/6/13	8
2629	Data Collection Workbook- Carenet CareSets Order Mangament	8 wks	Mon 7/15/13	Fri 9/6/13	8
2630	Acute Care PowerOrders Care Doc Order Management Workbook	8 wks	Mon 7/15/13	Fri 9/6/13	8
2631	Data Collection Workbook - PowerForm Changes	8 wks	Mon 7/15/13	Fri 9/6/13	8
2632	Data Collection Workbook - PowerChart Office® > Patient Tracking Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2633	Data Collection Workbook - PowerChart Office® > Order Folders Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2634	Data Collection Workbook - PowerChart Office® > Scheduling Appt Types Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2635	Data Collection Workbook - PowerChart Office® > Scheduling Resources Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2636	Data Collection Workbook - Message Center	8 wks	Mon 7/15/13	Fri 9/6/13	8
2637	Data Collection Workbook - PowerNote	8 wks	Mon 7/15/13	Fri 9/6/13	8
2638	Data Collection Workbook - PowerChart Office® > Cerner Wide Discharge Process Tab, Depart Template Tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
2639	Data Collection Workbook - PowerChart Office® > All remaining tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
2640	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
2641	Work Package: Ambulatory - Diagnosis Folders	14 wks	Mon 9/9/13	Fri 12/13/13	2624
2642	Work Package: Ambulatory - Histories	14 wks	Mon 9/9/13	Fri 12/13/13	2625
2643	Work Package: Ambulatory - Health Maintenance	14 wks	Mon 9/9/13	Fri 12/13/13	2626
2644	Work Package: Ambulatory - Pediatric Growth Chart	14 wks	Mon 9/9/13	Fri 12/13/13	2627
2645	Work Package: Ambulatory - Immunization Schedule	14 wks	Mon 9/9/13	Fri 12/13/13	2626
2646	Work Package: Ambulatory - Ad Hoc Charting Folders	14 wks	Mon 9/9/13	Fri 12/13/13	2628
2647	Work Package: Ambulatory - Task List	14 wks	Mon 7/15/13	Fri 10/18/13	8
2648	Work Package: Ambulatory - Purge Criteria	14 wks	Mon 9/9/13	Fri 12/13/13	2629
2649	Work Package: Ambulatory - PowerForm Textual Rendition	14 wks	Mon 7/15/13	Fri 10/18/13	8
2650	Work Package: Ambulatory - Order Catalog	14 wks	Mon 9/9/13	Fri 12/13/13	2630
2651	Work Package: Ambulatory - Nomenclature DTAs Powerform Grids Powerforms	14 wks	Mon 9/9/13	Fri 12/13/13	2631
2652	Work Package: Ambulatory - Prescription Reqs	14 wks	Mon 7/15/13	Fri 10/18/13	8
2653	Work Package: Ambulatory - Patient Tracking View	14 wks	Mon 9/9/13	Fri 12/13/13	2632
2654	Work Package: Ambulatory - Order Folders	14 wks	Mon 9/9/13	Fri 12/13/13	2633
2655	Work Package: Ambulatory - Requisition Routing	14 wks	Mon 7/15/13	Fri 10/18/13	8
2656	Work Package: Ambulatory - CareSets	14 wks	Mon 7/15/13	Fri 10/18/13	8
2657	Work Package: Ambulatory - PowerPlans	14 wks	Mon 7/15/13	Fri 10/18/13	8
2658	Work Package: Ambulatory - Order Sentences	14 wks	Mon 7/15/13	Fri 10/18/13	8
2659	Work Package: Ambulatory - PowerNote	14 wks	Mon 9/9/13	Fri 12/13/13	2637
2660	Work Package: Ambulatory - Physician Office and Clinic View Flowsheet	14 wks	Mon 7/15/13	Fri 10/18/13	8
2661	Work Package: Ambulatory - Interactive View Bands, Sections, DTAs, Includes,Excludes, Default Opens	14 wks	Mon 7/15/13	Fri 10/18/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2662	Work Package: Ambulatory - Interactive View Position Location	14 wks	Mon 7/15/13	Fri 10/18/13	8
2663	Work Package: Ambulatory - Appointment Types	14 wks	Mon 9/9/13	Fri 12/13/13	2634
2664	Work Package: Ambulatory - Scheduling Resources	14 wks	Mon 9/9/13	Fri 12/13/13	2635
2665	Work Package: Ambulatory - Note Types	14 wks	Mon 7/15/13	Fri 10/18/13	8
2666	Work Package: Ambulatory - Message Center Pools	14 wks	Mon 9/9/13	Fri 12/13/13	2636
2667	Work Package: Ambulatory - Prescription	14 wks	Mon 9/9/13	Fri 12/13/13	2637
2668	Work Package: Ambulatory - M-Page Configuration	14 wks	Mon 7/15/13	Fri 10/18/13	8
2669	Work Package: Ambulatory - ESH Review and Build	14 wks	Mon 9/9/13	Fri 12/13/13	2631
2670	Work Package: Ambulatory - Depart	14 wks	Mon 9/9/13	Fri 12/13/13	2638
2671	Work Package: Ambulatory - Foreign Scheduling Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
2672	Work Package: Ambulatory - Problems/Dx	14 wks	Mon 9/9/13	Fri 12/13/13	2639
2673	Work Package: Ambulatory - Allergies	14 wks	Mon 7/15/13	Fri 10/18/13	8
2674	Work Package: Ambulatory - Message Center Design	14 wks	Mon 9/9/13	Fri 12/13/13	2636
2675	Work Package: Ambulatory - Documentation Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
2676	Work Package: Ambulatory - Orders Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
2677	Work Package: Ambulatory - Medication Reconcilation Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
2678	**TEST**	**30 wks**	**Mon 10/21/13**	**Fri 5/16/14**	
2679	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
2680	QC Test: Ambulatory - Diagnosis Folders	3 wks	Mon 12/16/13	Fri 1/3/14	2641
2681	QC Test: Ambulatory - Histories	3 wks	Mon 12/16/13	Fri 1/3/14	2642
2682	QC Test: Ambulatory - Health Maintenance	3 wks	Mon 12/16/13	Fri 1/3/14	2643
2683	QC Test: Ambulatory - Pediatric Growth Chart	3 wks	Mon 12/16/13	Fri 1/3/14	2644
2684	QC Test: Ambulatory - Immunization Schedule	3 wks	Mon 12/16/13	Fri 1/3/14	2645
2685	QC Test: Ambulatory - Ad Hoc Charting Folders	3 wks	Mon 12/16/13	Fri 1/3/14	2646
2686	QC Test: Ambulatory - Task List	3 wks	Mon 10/21/13	Fri 11/8/13	2647
2687	QC Test: Ambulatory - Purge Criteria	3 wks	Mon 12/16/13	Fri 1/3/14	2648
2688	QC Test: Ambulatory - PowerForm Textual Rendition	3 wks	Mon 10/21/13	Fri 11/8/13	2649
2689	QC Test: Ambulatory - Order Catalog	3 wks	Mon 12/16/13	Fri 1/3/14	2650
2690	QC Test: Ambulatory - Nomenclature DTAs Powerform Grids Powerforms	3 wks	Mon 12/16/13	Fri 1/3/14	2651
2691	QC Test: Ambulatory - Prescription Reqs	3 wks	Mon 10/21/13	Fri 11/8/13	2652
2692	QC Test: Ambulatory - Patient Tracking View	3 wks	Mon 12/16/13	Fri 1/3/14	2653
2693	QC Test: Ambulatory - Order Folders	3 wks	Mon 12/16/13	Fri 1/3/14	2654

ID	Task Name	Duration	Start	Finish	Predecessors
2694	QC Test: Ambulatory - Requisition Routing	3 wks	Mon 10/21/13	Fri 11/8/13	2655
2695	QC Test: Ambulatory - CareSets	3 wks	Mon 10/21/13	Fri 11/8/13	2656
2696	QC Test: Ambulatory - PowerPlans	3 wks	Mon 10/21/13	Fri 11/8/13	2657
2697	QC Test: Ambulatory - Order Sentences	3 wks	Mon 10/21/13	Fri 11/8/13	2658
2698	QC Test: Ambulatory - PowerNote	3 wks	Mon 12/16/13	Fri 1/3/14	2659
2699	QC Test: Ambulatory - Physician Office and Clinic View Flowsheet	3 wks	Mon 10/21/13	Fri 11/8/13	2660
2700	QC Test: Ambulatory - Interactive View Bands, Sections, DTAs, Includes,Excludes, Default Opens	3 wks	Mon 10/21/13	Fri 11/8/13	2661
2701	QC Test: Ambulatory - Interactive View Position Location	3 wks	Mon 10/21/13	Fri 11/8/13	2662
2702	QC Test: Ambulatory - Appointment Types	3 wks	Mon 12/16/13	Fri 1/3/14	2663
2703	QC Test: Ambulatory - Scheduling Resources	3 wks	Mon 12/16/13	Fri 1/3/14	2664
2704	QC Test: Ambulatory - Note Types	3 wks	Mon 10/21/13	Fri 11/8/13	2665
2705	QC Test: Ambulatory - Message Center Pools	3 wks	Mon 12/16/13	Fri 1/3/14	2666
2706	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
2707	Localize Unit Test Scripts - PowerChart Ambulatory	5 wks	Mon 12/16/13	Fri 1/17/14	11
2708	Unit Test Scripts - PowerChart Ambulatory	3 wks	Mon 1/20/14	Fri 2/7/14	2707
2709	Unit Test: Ambulatory - Diagnosis Folders	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2641,2680
2710	Unit Test: Ambulatory - Histories	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2642,2681
2711	Unit Test: Ambulatory - Health Maintenance	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2643,2682
2712	Unit Test: Ambulatory - Pediatric Growth Chart	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2644,2683
2713	Unit Test: Ambulatory - Immunization Schedule	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2645,2684
2714	Unit Test: Ambulatory - Ad Hoc Charting Folders	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2646,2685
2715	Unit Test: Ambulatory - Task List	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2647,2686
2716	Unit Test: Ambulatory - Purge Criteria	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2648,2687
2717	Unit Test: Ambulatory - PowerForm Textual Rendition	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2649,2688
2718	Unit Test: Ambulatory - Order Catalog	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2650,2689
2719	Unit Test: Ambulatory - Nomenclature DTAs Powerform Grids Powerforms	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2651,2690
2720	Unit Test: Ambulatory - Prescription Reqs	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2652,2691
2721	Unit Test: Ambulatory - Patient Tracking View	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2653,2692
2722	Unit Test: Ambulatory - Order Folders	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2654,2693
2723	Unit Test: Ambulatory - Requisition Routing	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2655,2694
2724	Unit Test: Ambulatory - CareSets	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2656,2695

ID	Task Name	Duration	Start	Finish	Predecessors
2725	Unit Test: Ambulatory - PowerPlans	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2657,2696
2726	Unit Test: Ambulatory - Order Sentences	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2658,2697
2727	Unit Test: Ambulatory - PowerNote	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2659,2698
2728	Unit Test: Ambulatory - Physician Office and Clinic View Flowsheet	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2660,2699
2729	Unit Test: Ambulatory - Interactive View Bands, Sections, DTAs, Includes,Excludes, Default Opens	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2661,2700
2730	Unit Test: Ambulatory - Interactive View Position Location	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2662,2701
2731	Unit Test: Ambulatory - Appointment Types	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2663,2702
2732	Unit Test: Ambulatory - Scheduling Resources	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2664,2703
2733	Unit Test: Ambulatory - Note Types	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2665,2704
2734	Unit Test: Ambulatory - Message Center Pools	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2666,2705
2735	Unit Test: Ambulatory - Prescription	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2667
2736	Unit Test: Ambulatory - M-Page Configuration	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2668
2737	Unit Test: Ambulatory - ESH Review and Build	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2669
2738	Unit Test: Ambulatory - Depart	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2670
2739	Unit Test: Ambulatory - Foreign Scheduling Build	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2671
2740	Unit Test: Ambulatory - Problems/Dx	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2672
2741	Unit Test: Ambulatory - Allergies	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2673
2742	Unit Test: Ambulatory - Message Center Design	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2674
2743	Unit Test: Ambulatory - Documentation Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2675
2744	Unit Test: Ambulatory - Orders Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2676
2745	Unit Test: Ambulatory - Medication Reconcilation Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	2708,2677
2746	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2747	Localize System Test Tracking and Scripts - PowerChart Ambulatory	1 wk	Mon 12/16/13	Fri 12/20/13	11
2748	First Draft System Test Scripts - PowerChart Ambulatory	2 wks	Mon 12/23/13	Fri 1/3/14	2747
2749	Final System Test Scripts - PowerChart Ambulatory	2 wks	Mon 12/23/13	Fri 1/3/14	2747
2750	Complete System Testing - PowerChart Ambulatory	3 wks	Mon 1/6/14	Fri 1/24/14	2749
2751	**Integration Testing**	**22 wks**	**Mon 12/16/13**	**Fri 5/16/14**	
2752	Integration Test Scripts - PowerChart Ambulatory	5 wks	Mon 12/16/13	Fri 1/17/14	11
2753	Complete Integration Testing - PowerChart Ambulatory	5 wks	Mon 4/14/14	Fri 5/16/14	2752,14SS
2754	Milestone: Conclude All Testing - PowerChart Ambulatory	0 days	Fri 5/16/14	Fri 5/16/14	2709,2710,2711,2712,
2755	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2756	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
2757	Conversion Readiness Assessment - PowerChart Ambulatory	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2758	Review & Update Conversion Cutover Plan (sent by IA) - PowerChart Ambulatory	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2759	Complete the Turnover Process documentation- PowerChart Ambulatory	5 wks	Mon 6/30/14	Fri 8/1/14	18
2760	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2761	Complete Post Conversion Assessment Workbook for PowerChart Ambulatory	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2762	**PowerChart Maternity**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
2763	**DESIGN**	**19 wks**	**Fri 4/26/13**	**Fri 9/6/13**	
2764	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
2765	Conduct Open House Demo Session - PCMaternity	1 wk	Mon 4/29/13	Fri 5/3/13	5
2766	Complete PCMaternity WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2767	Complete Open House Scripts - PCMaternity	4 wks	Fri 4/26/13	Fri 5/24/13	5
2768	Onsite Workflow Assessment - PCMaternity Management	1 wk	Mon 4/29/13	Fri 5/3/13	5
2769	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
2770	Data collection Workbook - Acute Care PowerOrders Care Doc Adhoc Folders	8 wks	Mon 7/15/13	Fri 9/6/13	8
2771	Data Collection Workbook - Interactive View Position Location	8 wks	Mon 7/15/13	Fri 9/6/13	8
2772	Data Collection Workbook - Iview PowerChart Maternity	8 wks	Mon 7/15/13	Fri 9/6/13	8
2773	Data Collection Workbook - Result Copy - PowerChart Maternity	8 wks	Mon 7/15/13	Fri 9/6/13	8
2774	Data Collection Workbook - PowerForm Modifications	8 wks	Mon 7/15/13	Fri 9/6/13	8
2775	Data Collection Workbook - Pregnancy Tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
2776	Data Collection Workbook - Powerchart Maternity Rules	8 wks	Mon 7/15/13	Fri 9/6/13	8
2777	Data Collection Workbook - Powerchart Maternity Order Sets	8 wks	Mon 7/15/13	Fri 9/6/13	8
2778	Data Collection Workbook - Housewide Depart Process	8 wks	Mon 7/15/13	Fri 9/6/13	8
2779	Data Collection Workbook - Core Systems Security	8 wks	Mon 7/15/13	Fri 9/6/13	8
2780	Data Collection Workbook - Registration Management Conversations	8 wks	Mon 7/15/13	Fri 9/6/13	8
2781	**BUILD**	**51.2 wks**	**Fri 12/21/12**	**Fri 12/13/13**	
2782	Work Package: PCM - Ad Hoc Charting Folders	14 wks	Mon 9/9/13	Fri 12/13/13	2770
2783	Work Package: PCM - Position and Position-Location build and sequencing	14 wks	Mon 9/9/13	Fri 12/13/13	2771
2784	Work Package: PCM - Interactive View	14 wks	Mon 9/9/13	Fri 12/13/13	2772
2785	Work Package: PCM - Result Copy / Related Records	14 wks	Mon 9/9/13	Fri 12/13/13	2773
2786	Work Package: PCM - Tracking Board	14 wks	Mon 7/15/13	Fri 10/18/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2787	Work Package: PCM - Pregnancy Summary and Newborn Summary Mpages	14 wks	Mon 7/15/13	Fri 10/18/13	8
2788	Work Package: PCM - Nomenclature/DTAs/Powerforms	14 wks	Mon 9/9/13	Fri 12/13/13	2774
2789	Work Package: PCM - Concept Mapping, Reports	14 wks	Mon 7/15/13	Fri 10/18/13	8
2790	Work Package: PCM - Preferences/Nomenclature Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2775
2791	Work Package: PCM - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	2776
2792	Work Package: PCM - Order Sets	14 wks	Mon 9/9/13	Fri 12/13/13	2777
2793	Work Package: PCM - Depart Process	14 wks	Mon 9/9/13	Fri 12/13/13	2778
2794	Work Package: PCM - PowerNote	14 wks	Mon 7/15/13	Fri 10/18/13	8
2795	Work Package: PCM - Core Security	14 wks	Mon 9/9/13	Fri 12/13/13	2779
2796	Work Package: PCM - Registration	14 wks	Mon 9/9/13	Fri 12/13/13	2780
2797	Work Package: PCM - Fetalink Annotation Configuration	14 wks	Fri 12/21/12	Thu 3/28/13	
2798	**TEST**	**19 wks**	**Mon 10/21/13**	**Fri 2/28/14**	
2799	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
2800	QC Test: PCM - Ad Hoc Charting Folders	3 wks	Mon 12/16/13	Fri 1/3/14	2782
2801	QC Test: PCM - Position and Position-Location build and sequencing	3 wks	Mon 12/16/13	Fri 1/3/14	2783
2802	QC Test: PCM - Interactive View	3 wks	Mon 12/16/13	Fri 1/3/14	2784
2803	QC Test: PCM - Result Copy / Related Records	3 wks	Mon 12/16/13	Fri 1/3/14	2785
2804	QC Test: PCM - Tracking Board	3 wks	Mon 10/21/13	Fri 11/8/13	2786
2805	QC Test: PCM - Pregnancy Summary and Newborn Summary Mpages	3 wks	Mon 10/21/13	Fri 11/8/13	2787
2806	QC Test: PCM - Nomenclature/DTAs/Powerforms	3 wks	Mon 12/16/13	Fri 1/3/14	2788
2807	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
2808	Localize Unit Test Scripts - PCMaternity	5 wks	Mon 12/16/13	Fri 1/17/14	11
2809	Unit Test Scripts - PCMaternity	3 wks	Mon 1/20/14	Fri 2/7/14	2808
2810	Unit Test: PCM - Ad Hoc Charting Folders	3 wks	Mon 2/10/14	Fri 2/28/14	2782,2809,2800
2811	Unit Test: PCM - Position and Position-Location build and sequencing	3 wks	Mon 2/10/14	Fri 2/28/14	2783,2809,2801
2812	Unit Test: PCM - Interactive View	3 wks	Mon 2/10/14	Fri 2/28/14	2784,2809,2802
2813	Unit Test: PCM - Result Copy / Related Records	3 wks	Mon 2/10/14	Fri 2/28/14	2785,2809,2803
2814	Unit Test: PCM - Tracking Board	3 wks	Mon 2/10/14	Fri 2/28/14	2786,2809,2804
2815	Unit Test: PCM - Pregnancy Summary and Newborn Summary Mpages	3 wks	Mon 2/10/14	Fri 2/28/14	2787,2809,2805
2816	Unit Test: PCM - Nomenclature/DTAs/Powerforms	3 wks	Mon 2/10/14	Fri 2/28/14	2788,2809,2806
2817	Unit Test: PCM - Concept Mapping, Reports	3 wks	Mon 2/10/14	Fri 2/28/14	2789,2809
2818	Unit Test: PCM - Preferences/Nomenclature Categories	3 wks	Mon 2/10/14	Fri 2/28/14	2790,2809
2819	Unit Test: PCM - Rules	3 wks	Mon 2/10/14	Fri 2/28/14	2791,2809

ID	Task Name	Duration	Start	Finish	Predecessors
2820	Unit Test: PCM - Order Sets	3 wks	Mon 2/10/14	Fri 2/28/14	2792,2809
2821	Unit Test: PCM - Depart Process	3 wks	Mon 2/10/14	Fri 2/28/14	2793,2809
2822	Unit Test: PCM - PowerNote	3 wks	Mon 2/10/14	Fri 2/28/14	2794,2809
2823	Unit Test: PCM - Core Security	3 wks	Mon 2/10/14	Fri 2/28/14	2795,2809
2824	Unit Test: PCM - Registration	3 wks	Mon 12/16/13	Fri 1/3/14	2796
2825	Unit Test: PCM - Fetalink Annotation Configuration	3 wks	Mon 2/10/14	Fri 2/28/14	2809
2826	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2827	Localize System Test Tracking and Scripts - PCMaternity	1 wk	Mon 12/16/13	Fri 12/20/13	11
2828	First Draft System Test Scripts - PCMaternity	2 wks	Mon 12/23/13	Fri 1/3/14	2827
2829	Final System Test Scripts - PCMaternity	2 wks	Mon 12/23/13	Fri 1/3/14	2827
2830	Complete System Testing - PCMaternity	3 wks	Mon 1/6/14	Fri 1/24/14	2829
2831	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2832	Integration Test Scripts - PCMaternity	5 wks	Mon 12/16/13	Fri 1/17/14	11
2833	Complete Integration Testing - PCMaternity	5 wks	Mon 1/20/14	Fri 2/21/14	2832
2834	Milestone: Conclude All Testing - PCMaternity	0 days	Fri 2/28/14	Fri 2/28/14	2810,2811,2812,2813,
2835	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2836	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2837	Conversion Readiness Assessment - PCMaternity	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2838	Review & Update Conversion Cutover Plan (sent by IA) - PCMaternity	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2839	Complete the Turnover Process documentation- PCMaternity	5 wks	Mon 6/30/14	Fri 8/1/14	18
2840	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2841	Complete Post Conversion Assessment Workbook for PCMaternity	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2842	**PowerChart Oncology**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
2843	**DESIGN**	**19 wks**	**Mon 4/29/13**	**Fri 9/6/13**	
2844	**Establish Context for Design**	**4 wks**	**Mon 4/29/13**	**Fri 5/24/13**	
2845	Conduct Open House Demo Session - PCOncology	1 wk	Mon 4/29/13	Fri 5/3/13	5
2846	Complete PCOncology WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
2847	Onsite Workflow Assessment - PCOncology Management	1 wk	Mon 5/20/13	Fri 5/24/13	7
2848	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
2849	Data Collection Workbook - PowerChart Oncology	8 wks	Mon 7/15/13	Fri 9/6/13	8
2850	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
2851	Work Package: Oncology - Summary	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2852	Work Package: Oncology - Flowsheet	14 wks	Mon 9/9/13	Fri 12/13/13	2849

ID	Task Name	Duration	Start	Finish	Predecessors
2853	Work Package: Oncology - Staging	14 wks	Mon 7/15/13	Fri 10/18/13	8
2854	Work Package: Oncology - Neutropenia MPage	14 wks	Mon 7/15/13	Fri 10/18/13	8
2855	Work Package: Oncology - PowerPlans	14 wks	Mon 7/15/13	Fri 10/18/13	8
2856	Work Package: Oncology - CMS Infusion Billing	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2857	Work Package: Oncology - Rules	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2858	Work Package: Oncology - Interactive View	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2859	Work Package: Oncology - PowerNote	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2860	Work Package: Oncology - Tracking Board	14 wks	Mon 7/15/13	Fri 10/18/13	8
2861	Work Package: Oncology - Clinical Trials Basic	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2862	Work Package: Oncology - Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2863	Work Package: Oncology - Privileges	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2864	Work Package: Oncology - Task Access	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2865	Work Package: Oncology - Ops Jobs/Purge Criteria	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2866	Work Package: Oncology - PowerPlan Pre-Requisites	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2867	Work Package: Oncology - Regimens	14 wks	Mon 9/9/13	Fri 12/13/13	2849
2868	**TEST**	**65.2 wks**	**Fri 12/21/12**	**Fri 3/21/14**	
2869	**Unit Testing**	**65.2 wks**	**Fri 12/21/12**	**Fri 3/21/14**	
2870	Localize Unit Test Scripts - PCOncology	5 wks	Fri 12/21/12	Thu 1/24/13	
2871	Unit Test Scripts - PCOncology	3 wks	Fri 1/25/13	Thu 2/14/13	2870
2872	Unit Test: Oncology - Summary	3 wks	Mon 12/16/13	Fri 1/3/14	2851,2871
2873	Unit Test: Oncology - Flowsheet	3 wks	Mon 12/16/13	Fri 1/3/14	2852,2871
2874	Unit Test: Oncology - Staging	3 wks	Mon 10/21/13	Fri 11/8/13	2853,2871
2875	Unit Test: Oncology - Neutropenia MPage	3 wks	Mon 10/21/13	Fri 11/8/13	2854,2871
2876	Unit Test: Oncology - PowerPlans	3 wks	Mon 10/21/13	Fri 11/8/13	2855,2871
2877	Unit Test: Oncology - CMS Infusion Billing	3 wks	Mon 12/16/13	Fri 1/3/14	2856,2871
2878	Unit Test: Oncology - Rules	3 wks	Mon 12/16/13	Fri 1/3/14	2857,2871
2879	Unit Test: Oncology - Interactive View	3 wks	Mon 12/16/13	Fri 1/3/14	2858,2871
2880	Unit Test: Oncology - PowerNote	3 wks	Mon 12/16/13	Fri 1/3/14	2859,2871
2881	Unit Test: Oncology - Tracking Board	3 wks	Mon 10/21/13	Fri 11/8/13	2860,2871
2882	Unit Test: Oncology - Clinical Trials Basic	3 wks	Mon 12/16/13	Fri 1/3/14	2861,2871
2883	Work Package: Oncology - Preferences	14 wks	Mon 12/16/13	Fri 3/21/14	2862,2871
2884	Work Package: Oncology - Privileges	14 wks	Mon 12/16/13	Fri 3/21/14	2863,2871
2885	Work Package: Oncology - Task Access	14 wks	Mon 12/16/13	Fri 3/21/14	2864,2871

ID	Task Name	Duration	Start	Finish	Predecessors
2886	Work Package: Oncology - Ops Jobs/Purge Criteria	14 wks	Mon 12/16/13	Fri 3/21/14	2865,2871
2887	Work Package: Oncology - PowerPlan Pre-Requisites	14 wks	Mon 12/16/13	Fri 3/21/14	2866,2871
2888	Work Package: Oncology - Regimens	14 wks	Mon 12/16/13	Fri 3/21/14	2867,2871
2889	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2890	Localize System Test Tracking and Scripts - PCOncology	1 wk	Mon 12/16/13	Fri 12/20/13	11
2891	First Draft System Test Scripts - PCOncology	2 wks	Mon 12/23/13	Fri 1/3/14	2890
2892	Final System Test Scripts - PCOncology	2 wks	Mon 12/23/13	Fri 1/3/14	2890
2893	Complete System Testing - PCOncology	3 wks	Mon 1/6/14	Fri 1/24/14	2892
2894	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2895	Integration Test Scripts - PCOncology	5 wks	Mon 12/16/13	Fri 1/17/14	11
2896	Complete Integration Testing - PCOncology	5 wks	Mon 1/20/14	Fri 2/21/14	2895
2897	Milestone: Conclude All Testing - PCOncology	0 days	Fri 3/21/14	Fri 3/21/14	2872,2873,2874,2876,
2898	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2899	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2900	Conversion Readiness Assessment - PCOncology	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2901	Review & Update Conversion Cutover Plan (sent by IA) - PCOncology	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2902	Complete the Turnover Process documentation- PCOncology	5 wks	Mon 6/30/14	Fri 8/1/14	18
2903	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2904	Complete Post Conversion Assessment Workbook for PCOncology	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2905	**Physician Documentation**	**73 wks**	**Fri 4/26/13**	**Fri 9/19/14**	
2906	**DESIGN**	**19 wks**	**Fri 4/26/13**	**Fri 9/6/13**	
2907	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
2908	Conduct Open House Demo Session - Physician Documentation	1 wk	Mon 5/20/13	Fri 5/24/13	7
2909	Complete Open House Scripts - Physician Documentation	4 wks	Fri 4/26/13	Fri 5/24/13	5
2910	Onsite Workflow Assessment - Physician Documentation	1 wk	Mon 5/20/13	Fri 5/24/13	7
2911	Complete Physician Documentation WBT	1 day	Mon 4/29/13	Mon 4/29/13	5
2912	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
2913	Data Collection Workbook - Localizing PowerNote and Dynamic Doc	8 wks	Mon 7/15/13	Fri 9/6/13	8
2914	**BUILD**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
2915	Work Package: Import Physician Documentation	14 wks	Mon 9/9/13	Fri 12/13/13	2913
2916	Work Package: Localize Physician Documentation	14 wks	Mon 9/9/13	Fri 12/13/13	2913
2917	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
2918	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
2919	QC Test: Physician Documentation	3 wks	Mon 12/16/13	Fri 1/3/14	2915,2916
2920	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
2921	Localize Unit Test Scripts - Physician Documentation	5 wks	Mon 12/16/13	Fri 1/17/14	11
2922	Unit Test Scripts - Physician Documentation	3 wks	Mon 1/20/14	Fri 2/7/14	2921,2919
2923	Unit Test: Physician Documentation	15 days	Mon 2/10/14	Fri 2/28/14	2915,2922,2916
2924	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
2925	Localize System Test Tracking and Scripts - Physician Documentation	1 wk	Mon 12/16/13	Fri 12/20/13	11
2926	First Draft System Test Scripts - Physician Documentation	2 wks	Mon 12/23/13	Fri 1/3/14	2925
2927	Final System Test Scripts - Physician Documentation	2 wks	Mon 12/23/13	Fri 1/3/14	2925
2928	Complete System Testing - Physician Documentation	3 wks	Mon 1/6/14	Fri 1/24/14	2927
2929	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
2930	Integration Test Scripts - Physician Documentation	5 wks	Mon 12/16/13	Fri 1/17/14	11
2931	Complete Integration Testing - Physician Documentation	5 wks	Mon 1/20/14	Fri 2/21/14	2930
2932	Milestone: Conclude All Testing - Physician Documentation	0 days	Fri 2/28/14	Fri 2/28/14	2923,2928,2931
2933	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
2934	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
2935	Conversion Readiness Assessment - Physician Documentation	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
2936	Review & Update Conversion Cutover Plan (sent by IA) - Physician Documentation	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
2937	Complete the Turnover Process documentation- Physician Documentation	5 wks	Mon 6/30/14	Fri 8/1/14	18
2938	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
2939	Complete Post Conversion Assessment Workbook for Physician Documentation	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
2940	**SOW #12 - OR and Anesthesiology (SurgiNet / Anesthesia)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
2941	**Task 1 Conduct SOW Kick-off/ Mobilization**	**22 wks**	**Mon 12/24/12**	**Fri 5/24/13**	
2942	Subtask 1.1 Develop detailed Sub-Project Work Plan - OR and Anesthesiology	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
2943	Subtask 1.2 Conduct Initiation session for OR and Anesthesiology Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
2944	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	7
2945	**DESIGN**	**46 wks**	**Mon 12/31/12**	**Fri 11/15/13**	
2946	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**9 wks**	**Fri 4/26/13**	**Fri 6/28/13**	
2947	Conduct Open House Demo Session - SurgiNet	1 wk	Mon 5/20/13	Fri 5/24/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
2948	Conduct Open House Demo Session - Anesthsia	1 wk	Mon 5/20/13	Fri 5/24/13	7
2949	Complete WBT - SurgiNet	4 wks	Mon 4/29/13	Fri 5/24/13	5
2950	Complete WBT - Anesthesia	4 wks	Mon 4/29/13	Fri 5/24/13	5
2951	Complete Open House Scripts - SurgiNet	4 wks	Fri 4/26/13	Fri 5/24/13	5
2952	Complete Open House Scripts - Anesthesia	4 wks	Fri 4/26/13	Fri 5/24/13	5
2953	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
2954	Subtask 2.2 Conduct Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
2955	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/24/13	Fri 6/28/13	2954FS+4 wks
2956	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
2957	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
2958	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	2957
2959	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
2960	Data Collection Workbook - Project Start Up - Surgery	8 wks	Mon 12/31/12	Fri 2/22/13	2
2961	Data Collection Workbook - SurgiNet® Anesthesia (Document Types and Preferences tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2962	Data Collection Workbook - SurgiNet® Anesthesia (Medications and Medication Categories tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2963	Data Collection Workbook - SurgiNet® Anesthesia (Medication Preferences Tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2964	Data Collection Workbook - SurgiNet® Anesthesia (Fluids & Fluid Categories Tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2965	Data Collection Workbook - SurgiNet® Anesthesia (Diluants tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2966	Data Collection Workbook - SurgiNet® Anesthesia (Parameters and Parameter Categories tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2967	Data Collection Workbook - SurgiNet® Anesthesia (Actions, Action Categories, Action Details tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2968	Data Collection Workbook - SurgiNet® Anesthesia (Inventory and Inventory Categories tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2969	Data Collection Workbook - SurgiNet® Anesthesia (Personnel, Personnel Categories tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2970	Data Collection Workbook - SurgiNet® Anesthesia (Macro Categories tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2971	Data Collection Workbook - SurgiNet® Locations (Locations tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2972	Data Collection Workbook - SurgiNet® Inventory (Item Fill Return Hierarchy tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2973	Data Collection Workbook - SurgiNet® Procedures (Surgical Procedures tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2974	Data Collection Workbook - SurgiNet® Procedures (Would Class, Anesthesia Type, Surgical Specialties, and Case Levels tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2975	Data Collection Workbook - SurgiNet® Scheduling (Case and Appt Info tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2976	Data Collection Workbook - SurgiNet® Scheduling (Procedure Info tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2977	Data Collection Workbook - SurgiNet® Scheduling (Schedulable Equipment tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2978	Data Collection Workbook - SurgiNet® Scheduling (Schedulable Personnel tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2979	Data Collection Workbook - SurgiNet® Surgeons (Provider Privileges tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2980	Data Collection Workbook - SurgiNet® Scheduling (Blocks tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2981	Data Collection Workbook - SurgiNet® Scheduling (Schedule Display tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2982	Data Collection Workbook - SurgiNet® Inventory (Item Master tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2983	Data Collection Workbook - SurgiNet® Documentation (all tabs that say forms)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2984	Data Collection Workbook - SurgiNet® Case Logging (Procedure Modifiers, Surgical Roles, ASA Class, Delay Reasons, Terminate & Discontinue Reasons, Unfinalization Reasons tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2985	Data Collection Workbook - SurgiNet® FBDesigner Forms (All tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2986	Data Collection Workbook - SurgiNet® Preference Cards (Preference Card Pick List tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2987	Data Collection Workbook - SurgiNet® Preference Cards (Preference Card Comments)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2988	Data Collection Workbook - SurgiNet® Documentation (Segment List tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2989	Data Collection Workbook - SurgiNet® Surgeons (Surgeons tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
2990	Data Collection Workbook - SurgiNet Reports Assessment (Reports Assessment tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2991	Data Collection Workbook - SurgiNet® Scheduling	8 wks	Mon 7/15/13	Fri 9/6/13	8
2992	Data Collection Workbook - SurgiNet® Case Tracking	8 wks	Mon 7/15/13	Fri 9/6/13	8
2993	Data Collection Workbook - SurgiNet® Perioperative Flowsheet	8 wks	Mon 7/15/13	Fri 9/6/13	8
2994	Data Collection Workbook - SurgiNet® Charging	8 wks	Mon 7/15/13	Fri 9/6/13	8
2995	Data Collection Workbook - SurgiNet® Surgeons (Staff Assign tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
2996	**Task 4 Conduct Design Review**	**6 wks**	**Mon 10/7/13**	**Fri 11/15/13**	
2997	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
2998	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/14/13	Fri 10/18/13	2997
2999	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/14/13	Fri 10/18/13	2997
3000	Subtask 4.4 Conduct OR and Anesthesiology Workflow Workshop	1 wk	Mon 10/14/13	Fri 10/18/13	2997
3001	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/11/13	Fri 11/15/13	3000FS+3 wks
3002	**Task 5 Complete Partial System Build (BUILD)**	**30 wks**	**Mon 5/20/13**	**Fri 12/13/13**	
3003	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
3004	Work Package: Anesthesia - Document Types and Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2961
3005	Work Package: Anesthesia - Medications and Medication Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2962
3006	Work Package: Anesthesia - Medication Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	2963
3007	Work Package: Anesthesia - Fluids & Fluid Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2964
3008	Work Package: Anesthesia - Dilutants	14 wks	Mon 9/9/13	Fri 12/13/13	2965
3009	Work Package: Anesthesia - Parameters and Parameter Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2966
3010	Work Package: Anesthesia - Actions, Action Categories, & Action Details	14 wks	Mon 9/9/13	Fri 12/13/13	2967
3011	Work Package: Anesthesia - Inventory and Inventory Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2968
3012	Work Package: Anesthesia - Personnel & Personnel Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2969
3013	Work Package: Anesthesia - Macro Categories	14 wks	Mon 9/9/13	Fri 12/13/13	2970
3014	Work Package: Anesthesia - Views	14 wks	Mon 7/15/13	Fri 10/18/13	8
3015	Work Package: SurgiNet - Locations	14 wks	Mon 9/9/13	Fri 12/13/13	2971
3016	Work Package: SurgiNet - Fill and Return Locations	14 wks	Mon 9/9/13	Fri 12/13/13	2972
3017	Work Package: SurgiNet - Procedures	14 wks	Mon 9/9/13	Fri 12/13/13	2973
3018	Work Package: SurgiNet - Procedure code sets	14 wks	Mon 9/9/13	Fri 12/13/13	2974
3019	Work Package: SurgiNet - OEF to Procedure Association	14 wks	Mon 5/20/13	Fri 8/23/13	7
3020	Work Package: SurgiNet - Scheduling Accept Formats	14 wks	Mon 9/9/13	Fri 12/13/13	2975

ID	Task Name	Duration	Start	Finish	Predecessors
3021	Work Package: SurgiNet - Procedure Order Entry Formats	14 wks	Mon 9/9/13	Fri 12/13/13	2976
3022	Work Package: SurgiNet - Schedulable Equipment	14 wks	Mon 9/9/13	Fri 12/13/13	2977
3023	Work Package: SurgiNet - Schedulable Personnel & Service Resources	14 wks	Mon 9/9/13	Fri 12/13/13	2978
3024	Work Package: SurgiNet - Provider Privileges	14 wks	Mon 9/9/13	Fri 12/13/13	2979
3025	Work Package: SurgiNet - Slots	14 wks	Mon 9/9/13	Fri 12/13/13	2980
3026	Work Package: SurgiNet - Templates	14 wks	Mon 9/9/13	Fri 12/13/13	2981
3027	Work Package: SurgiNet - Inventory	14 wks	Mon 9/9/13	Fri 12/13/13	2982
3028	Work Package: SurgiNet - Items in Locations, Costs, & Classes	14 wks	Mon 9/9/13	Fri 12/13/13	2982
3029	Work Package: SurgiNet - Documentation & Sequences	14 wks	Mon 9/9/13	Fri 12/13/13	2983
3030	Work Package: SurgiNet - Case Logging Code Sets	14 wks	Mon 9/9/13	Fri 12/13/13	2984
3031	Work Package: SurgiNet - FBDesigner Forms	14 wks	Mon 9/9/13	Fri 12/13/13	2985
3032	Work Package: SurgiNet - Pref Cards	14 wks	Mon 9/9/13	Fri 12/13/13	2986
3033	Work Package: SurgiNet - Pref Cards Comments	14 wks	Mon 9/9/13	Fri 12/13/13	2987
3034	Work Package: SurgiNet - Segment to Pref Card association	14 wks	Mon 9/9/13	Fri 12/13/13	2988
3035	Work Package: SurgiNet - Surgeons and Specialty	14 wks	Mon 9/9/13	Fri 12/13/13	2989
3036	Work Package: SurgiNet - Reports	14 wks	Mon 9/9/13	Fri 12/13/13	2990
3037	Work Package: SurgiNet - Scheduling Reasons	14 wks	Mon 9/9/13	Fri 12/13/13	2991
3038	Work Package: SurgiNet - Case Tracking	14 wks	Mon 9/9/13	Fri 12/13/13	2992
3039	Work Package: SurgiNet - Perioperative Flowsheet	14 wks	Mon 9/9/13	Fri 12/13/13	2993
3040	Work Package: SurgiNet - Charging	14 wks	Mon 9/9/13	Fri 12/13/13	2994
3041	Work Package: SurgiNet - Staff Assign	14 wks	Mon 9/9/13	Fri 12/13/13	2995
3042	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	3041
3043	**Task 6 Conduct System Validation**	**5 wks**	**Mon 12/16/13**	**Fri 1/17/14**	
3044	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
3045	Subtask 6.2 Conduct System Validation Session Follow-up	1 mon	Mon 12/23/13	Fri 1/17/14	3044
3046	**Task 7 Complete Build of OR and Anesthesiology and Conduct Unit and System Testing (TEST)**	**38 wks**	**Mon 8/26/13**	**Fri 5/16/14**	
3047	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	3042
3048	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	3047
3049	**Quality Center Testing**	**19 wks**	**Mon 8/26/13**	**Fri 1/3/14**	
3050	QC Test: Anesthesia - Document Types and Preferences	3 wks	Mon 12/16/13	Fri 1/3/14	3004
3051	QC Test: Anesthesia - Medications and Medication Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3005

ID	Task Name	Duration	Start	Finish	Predecessors
3052	QC Test: Anesthesia - Medication Preferences	3 wks	Mon 12/16/13	Fri 1/3/14	3006
3053	QC Test: Anesthesia - Fluids & Fluid Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3007
3054	QC Test: Anesthesia - Dilutants	3 wks	Mon 12/16/13	Fri 1/3/14	3008
3055	QC Test: Anesthesia - Parameters and Parameter Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3009
3056	QC Test: Anesthesia - Actions, Action Categories, & Action Details	3 wks	Mon 12/16/13	Fri 1/3/14	3010
3057	QC Test: Anesthesia - Inventory and Inventory Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3011
3058	QC Test: Anesthesia - Personnel & Personnel Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3012
3059	QC Test: Anesthesia - Macro Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3013
3060	QC Test: SurgiNet - Locations	3 wks	Mon 12/16/13	Fri 1/3/14	3015
3061	QC Test: SurgiNet - Fill and Return Locations	3 wks	Mon 12/16/13	Fri 1/3/14	3016
3062	QC Test: SurgiNet - Procedures	3 wks	Mon 12/16/13	Fri 1/3/14	3017
3063	QC Test: SurgiNet - Procedure code sets	3 wks	Mon 12/16/13	Fri 1/3/14	3018
3064	QC Test: SurgiNet - OEF to Procedure Association	3 wks	Mon 8/26/13	Fri 9/13/13	3019
3065	QC Test: SurgiNet - Scheduling Accept Formats	3 wks	Mon 12/16/13	Fri 1/3/14	3020
3066	QC Test: SurgiNet - Procedure Order Entry Formats	3 wks	Mon 12/16/13	Fri 1/3/14	3021
3067	QC Test: SurgiNet - Schedulable Equipment	3 wks	Mon 12/16/13	Fri 1/3/14	3022
3068	QC Test: SurgiNet - Schedulable Personnel & Service Resources	3 wks	Mon 12/16/13	Fri 1/3/14	3023
3069	QC Test: SurgiNet - Provider Privileges	3 wks	Mon 12/16/13	Fri 1/3/14	3024
3070	QC Test: SurgiNet - Slots	3 wks	Mon 12/16/13	Fri 1/3/14	3025
3071	QC Test: SurgiNet - Templates	3 wks	Mon 12/16/13	Fri 1/3/14	3026
3072	QC Test: SurgiNet - Inventory	3 wks	Mon 12/16/13	Fri 1/3/14	3027
3073	QC Test: SurgiNet - Items in Locations, Costs, & Classes	3 wks	Mon 12/16/13	Fri 1/3/14	3028
3074	QC Test: SurgiNet - Documentation & Sequences	3 wks	Mon 12/16/13	Fri 1/3/14	3029
3075	QC Test: SurgiNet - Case Logging Code Sets	3 wks	Mon 12/16/13	Fri 1/3/14	3030
3076	QC Test: SurgiNet - FBDesigner Forms	3 wks	Mon 12/16/13	Fri 1/3/14	3031
3077	QC Test: SurgiNet - Pref Cards	3 wks	Mon 12/16/13	Fri 1/3/14	3032
3078	QC Test: SurgiNet - Segment to Pref Card association	3 wks	Mon 12/16/13	Fri 1/3/14	3034
3079	QC Test: SurgiNet - Surgeons and Specialty	3 wks	Mon 12/16/13	Fri 1/3/14	3035
3080	QC Test: SurgiNet - Reports	3 wks	Mon 12/16/13	Fri 1/3/14	3036
3081	QC Test: SurgiNet - Scheduling Reasons	3 wks	Mon 12/16/13	Fri 1/3/14	3037
3082	**Unit Testing**	**9 wks**	**Mon 12/16/13**	**Fri 2/14/14**	
3083	Localize Unit Test Scripts - SurgiNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
3084	Localize Unit Test Scripts - Anethesia	5 wks	Mon 12/16/13	Fri 1/17/14	11

ID	Task Name	Duration	Start	Finish	Predecessors
3085	Unit Test Scripts - SurgiNet	1 wk	Mon 1/20/14	Fri 1/24/14	3083
3086	Unit Test Scripts - Anesthesia	1 wk	Mon 1/20/14	Fri 1/24/14	3084
3087	Unit Test: Document Types and Preferences	3 wks	Mon 1/27/14	Fri 2/14/14	3004,3086,3050
3088	Unit Test: Medications and Medication Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3005,3086,3051
3089	Unit Test: Medication Preferences	3 wks	Mon 1/27/14	Fri 2/14/14	3006,3086,3052
3090	Unit Test:Fluids & Fluid Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3007,3086,3008,3053
3091	Unit Test: Dilutants	3 wks	Mon 1/27/14	Fri 2/14/14	3086,3054
3092	Unit Test: Parameters and Parameter Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3009,3086,3055
3093	Unit Test: Actions, Action Categories, & Action Details	3 wks	Mon 1/27/14	Fri 2/14/14	3010,3086,3056
3094	Unit Test: Inventory and Inventory Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3011,3086,3057
3095	Unit Test: Personnel & Personnel Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3012,3086,3058
3096	Unit Test: Macro Categories	3 wks	Mon 1/27/14	Fri 2/14/14	3013,3086,3059
3097	Unit Test: Views	3 wks	Mon 1/27/14	Fri 2/14/14	3014,3086
3098	Unit Test: Locations	3 wks	Mon 1/27/14	Fri 2/14/14	3015,3085,3060
3099	Unit Test: Fill and Return Locations	3 wks	Mon 1/27/14	Fri 2/14/14	3016,3085,3061
3100	Unit Test: Procedures	3 wks	Mon 1/27/14	Fri 2/14/14	3017,3085,3062
3101	Unit Test: Procedure code sets	3 wks	Mon 1/27/14	Fri 2/14/14	3018,3085,3063
3102	Unit Test: OEF to Procedure Association	3 wks	Mon 1/27/14	Fri 2/14/14	3019,3085,3064
3103	Unit Test: Scheduling Accept Formats	3 wks	Mon 1/27/14	Fri 2/14/14	3020,3085,3065
3104	Unit Test: Procedure Order Entry Formats	3 wks	Mon 1/27/14	Fri 2/14/14	3021,3085,3066
3105	Unit Test: Schedulable Equipment	3 wks	Mon 1/27/14	Fri 2/14/14	3022,3085,3067
3106	Unit Test: Schedulable Personnel & Service Resources	3 wks	Mon 1/27/14	Fri 2/14/14	3023,3085,3068
3107	Unit Test: Provider Privileges	3 wks	Mon 1/27/14	Fri 2/14/14	3024,3085,3069
3108	Unit Test: Slots	3 wks	Mon 1/27/14	Fri 2/14/14	3025,3085,3070
3109	Unit Test: Templates	3 wks	Mon 1/27/14	Fri 2/14/14	3026,3085,3071
3110	Unit Test: Inventory	3 wks	Mon 1/27/14	Fri 2/14/14	3027,3085,3072
3111	Unit Test: Items in Locations, Costs, & Classes	3 wks	Mon 1/27/14	Fri 2/14/14	3028,3085,3073
3112	Unit Test: Documentation & Sequences	3 wks	Mon 1/27/14	Fri 2/14/14	3029,3085,3074
3113	Unit Test: Case Logging Code Sets	3 wks	Mon 1/27/14	Fri 2/14/14	3030,3085,3075
3114	Unit Test: FBDesigner Forms	3 wks	Mon 1/27/14	Fri 2/14/14	3031,3085,3076
3115	Unit Test: Pref Cards	3 wks	Mon 1/27/14	Fri 2/14/14	3032,3085,3077
3116	Unit Test: Pref Cards Comments	3 wks	Mon 1/27/14	Fri 2/14/14	3033,3085
3117	Unit Test: Segment to Pref Card association	3 wks	Mon 1/27/14	Fri 2/14/14	3034,3085,3078

ID	Task Name	Duration	Start	Finish	Predecessors
3118	Unit Test: Surgeons and Specialty	3 wks	Mon 1/27/14	Fri 2/14/14	3035,3085,3079
3119	Unit Test: Reports	3 wks	Mon 1/27/14	Fri 2/14/14	3085,3036,3080
3120	Unit Test: Scheduling Reasons	3 wks	Mon 1/27/14	Fri 2/14/14	3037,3085,3081
3121	Unit Test: Case Tracking	3 wks	Mon 1/27/14	Fri 2/14/14	3038,3085
3122	Unit Test: Perioperative Flowsheet	3 wks	Mon 1/27/14	Fri 2/14/14	3039,3085
3123	Unit Test: Charging	3 wks	Mon 1/27/14	Fri 2/14/14	3085,3040
3124	Unit Test: Staff Assign	3 wks	Mon 1/27/14	Fri 2/14/14	3041,3085
3125	**System Testing**	**8 wks**	**Mon 12/16/13**	**Fri 2/7/14**	
3126	Localize System Test Tracking and Scripts - SurgiNet	1 wk	Mon 12/16/13	Fri 12/20/13	11
3127	Localize System Test Tracking and Scripts - Anethesia	1 wk	Mon 12/16/13	Fri 12/20/13	11
3128	First Draft System Test Scripts - SurgiNet	2 wks	Mon 12/23/13	Fri 1/3/14	3126
3129	First Draft System Test Scripts - Anesthesia	2 wks	Mon 12/23/13	Fri 1/3/14	3127
3130	Final System Test Scripts - SurgiNet	2 wks	Mon 1/6/14	Fri 1/17/14	3128
3131	Final System Test Scripts - Anesthesia	2 wks	Mon 1/6/14	Fri 1/17/14	3129
3132	Complete System Testing - SurgiNet	3 wks	Mon 1/20/14	Fri 2/7/14	3130
3133	Complete System Testing - Anesthsia	3 wks	Mon 1/20/14	Fri 2/7/14	3131
3134	**Integration Testing**	**22 wks**	**Mon 12/16/13**	**Fri 5/16/14**	
3135	Integration Test Scripts - SurgiNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
3136	Integration Test Scripts - Anesthsia	5 wks	Mon 12/16/13	Fri 1/17/14	11
3137	Complete Integration Testing - SurgiNet	5 wks	Mon 4/14/14	Fri 5/16/14	3135,14SS
3138	Complete Integration Testing - Anesthsia	5 wks	Mon 4/14/14	Fri 5/16/14	3136,14SS
3139	Milestone: Conclude All Testing - SurgiNet	0 days	Fri 5/16/14	Fri 5/16/14	3098,3099,3100,3101,
3140	Milestone: Conclude All Testing - Anesthesia	0 days	Fri 5/16/14	Fri 5/16/14	3085,3086,3087,3088,
3141	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 5/16/14	Fri 5/16/14	3140FS-1 day
3142	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3143	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3144	Conversion Readiness Assessment - SurgiNet	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3145	Conversion Readiness Assessment - Anethesia	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3146	Review & Update Conversion Cutover Plan (sent by IA) - SurgiNet	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3147	Review & Update Conversion Cutover Plan (sent by IA) - Anesthesia	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3148	Complete the Turnover Process documentation- SurgiNet	5 wks	Mon 6/30/14	Fri 8/1/14	18
3149	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3150	Complete Post Conversion Assessment Workbook for SurgiNet	2 wks	Mon 9/8/14	Fri 9/19/14	24SS

ID	Task Name	Duration	Start	Finish	Predecessors
3151	Complete Post Conversion Assessment Workbook for Anesthesia	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3152	**ANCILLARIES**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
3153	**PathNet AP**	**91.2 wks**	**Fri 12/21/12**	**Fri 9/19/14**	
3154	**MIGRATION**	**60 wks**	**Mon 4/29/13**	**Fri 6/20/14**	
3155	Legacy Extract - PathNet Anatomic Pathology Order Catalog	2 wks	Mon 4/29/13	Fri 5/10/13	5
3156	Legacy Extract - PathNet Anatomic Pathology DTA	2 wks	Mon 4/29/13	Fri 5/10/13	5
3157	Legacy Extract - PathNet Anatomic Pathology DTA - Orderable Relationship	2 wks	Mon 4/29/13	Fri 5/10/13	5
3158	Legacy Extract - PathNet Anatomic Pathology Orderable Task	2 wks	Mon 4/29/13	Fri 5/10/13	5
3159	Legacy Extract - PathNet Anatomic Pathology DTA Procedures	2 wks	Mon 4/29/13	Fri 5/10/13	5
3160	Legacy Extract - PathNet Anatomic Pathology Interpretation Patterns	2 wks	Mon 4/29/13	Fri 5/10/13	5
3161	Legacy Extract - PathNet Cytology Report Parameters	2 wks	Mon 4/29/13	Fri 5/10/13	5
3162	Legacy Extract - PathNet Anatomic Pathology Correlation Studies	2 wks	Mon 4/29/13	Fri 5/10/13	5
3163	Legacy Extract - PathNet Anatomic Pathology Group and Prefixes	2 wks	Mon 4/29/13	Fri 5/10/13	5
3164	Legacy Extract - PathNet Anatomic Pathology Processing Groups.xls	2 wks	Mon 4/29/13	Fri 5/10/13	5
3165	Legacy Extract - PathNet Anatomic Pathology Miscellaneous.xls	2 wks	Mon 4/29/13	Fri 5/10/13	5
3166	Legacy Extract - PathNet Anatomic Pathology Order Catalog	2 wks	Mon 5/20/13	Fri 5/31/13	7
3167	Legacy Extract - PathNet Anatomic Pathology DTA	2 wks	Mon 5/20/13	Fri 5/31/13	7
3168	Legacy Extract - PathNet Anatomic Pathology DTA - Orderable Relationship	2 wks	Mon 5/20/13	Fri 5/31/13	7
3169	Legacy Extract - PathNet Anatomic Pathology Orderable Task	2 wks	Mon 5/20/13	Fri 5/31/13	7
3170	Legacy Extract - PathNet Anatomic Pathology DTA Procedures	2 wks	Mon 5/20/13	Fri 5/31/13	7
3171	Legacy Extract - PathNet Anatomic Pathology Interpretation Patterns	2 wks	Mon 5/20/13	Fri 5/31/13	7
3172	Legacy Extract - PathNet Cytology Report Parameters	2 wks	Mon 5/20/13	Fri 5/31/13	7
3173	Legacy Extract - PathNet Anatomic Pathology Correlation Studies	2 wks	Mon 5/20/13	Fri 5/31/13	7
3174	Legacy Extract - PathNet Anatomic Pathology Group and Prefixes	2 wks	Mon 5/20/13	Fri 5/31/13	7
3175	Legacy Extract - PathNet Anatomic Pathology Processing Groups.xls	2 wks	Mon 5/20/13	Fri 5/31/13	7
3176	Legacy Extract - PathNet Anatomic Pathology Miscellaneous.xls	2 wks	Mon 5/20/13	Fri 5/31/13	7
3177	Migration - PathNet Anatomic Pathology Aliasing Workbook	3 wks	Mon 10/7/13	Fri 10/25/13	9
3178	Migration - PathNet Anatomic Pathology Aliasing Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
3179	Release hold queue daily for AP	1 wk	Mon 6/16/14	Fri 6/20/14	18FS-2 wks
3180	**DESIGN**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3181	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
3182	Conduct Open House Demo Session - AP	1 wk	Mon 4/29/13	Fri 5/3/13	5
3183	Complete AP WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
3184	Complete Open House Scripts - AP	4 wks	Fri 4/26/13	Fri 5/24/13	5
3185	Onsite Workflow Assessment - AP	1 wk	Mon 5/20/13	Fri 5/24/13	7
3186	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3187	Data Collection Workbook - Project Start Up - Laboratory	8 wks	Mon 12/31/12	Fri 2/22/13	2
3188	Data Collection Workbook - PathNet Anatomic Pathology (Groups & Prefixes tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3189	Data Collection Workbook - PathNet Anatomic Pathology (Alpha Responses tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3190	Data Collection Workbook - PathNet Anatomic Pathology > Specimen Orderable, Processing Tasks- Charging - AP Billing Tasks tabs. (May need Data Collection Workbook- PathNet Common.)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3191	Data Collection Workbook - PathNet Anatomic Pathology (Specimen Orderables tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3192	Data Collection Workbook - PathNet Anatomic Pathology (Specimen Adequacy Interps & Diagnosis Interpretations)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3193	Data Collection Workbook - PathNet Anatomic Pathology (Processing Tasks)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3194	Data Collection Workbook - PathNet Anatomic Pathology (Processing Group Tasks tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3195	Data Collection Workbook - PathNet Anatomic Pathology (Reports tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3196	Data Collection Workbook - PathNet Anatomic Pathology (Cytology User Limits)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3197	Data Collection Workbook - PathNet Anatomic Pathology (Specimen List)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3198	Data Collection Workbook - PathNet Anatomic Pathology (Specimen Protocols tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3199	Data Collection Workbook - PathNet Anatomic Pathology (Cytology Standard Reports)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3200	Data Collection Workbook - PathNet Anatomic Pathology (Synoptic Worksheet to Specimen & Synoptic Worksheet to Report)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3201	Data Collection Workbook - PathNet Anatomic Pathology (Users and User Groups tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3202	Data Collection Workbook - PathNet Anatomic Pathology (Specimen List tab, column D)	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3203	Data Collection Workbook - PathNet Anatomic Pathology (Specimen Adequacy tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3204	Data Collection Workbook - PathNet Anatomic Pathology (Fixative tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3205	Data Collection Workbook - PathNet Anatomic Pathology (Accessioning Templates tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3206	Data Collection Workbook - PathNet Anatomic Pathology (Prefix Report Associations)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3207	Data Collection Workbook - PathNet Common (Signature Line Format Tool)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3208	Data Collection Workbook - PathNet Anatomic Pathology (Word Processing Templates tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3209	Data Collection Workbook - PathNet Anatomic Pathology (Report Status tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3210	Data Collection Workbook - PathNet Anatomic Pathology (Report Hold Reasons tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3211	Data Collection Workbook - PathNet Anatomic Pathology (Report History Groupings)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3212	Data Collection Workbook - PathNet Anatomic Pathology (DX Coding - Prefix Parameters)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3213	Data Collection Workbook - PathNet Anatomic Pathology (DX Correlation - Terms and Studies tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3214	Data Collection Workbook - PathNet Anatomic Pathology (System Selected DX Correlation)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3215	Data Collection Workbook - PathNet Anatomic Pathology (Cytology Screening tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3216	Data Collection Workbook - PathNet Anatomic Pathology (Cytology Report Parameters tab)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3217	Data Collection Workbook - PathNet Anatomic Pathology (Proficiency Events)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3218	Data Collection Workbook - PathNet Anatomic Pathology (Diagnosis Categories)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3219	Data Collection Workbook - PathNet Anatomic Pathology (Cyto Alpha Security)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3220	Data Collection Workbook - PathNet Anatomic Pathology (Discrepancies and Variances)	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3221	Data Collection Workbook - PathNet Anatomic Pathology (FT Termination Reasons)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3222	Data Collection Workbook - PathNet Anatomic Pathology (FT Types)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3223	Data Collection Workbook - PathNet Anatomic Pathology (FT Alpha Responses)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3224	Data Collection Workbook - PathNet Common (Charging - AP Billing Tasks)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3225	Data Collection Workbook - PathNet Anatomic Pathology (Diagnosis Summary)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3226	Data Collection Workbook - PathNet Anatomic Pathology (Imaging Tool)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3227	Data Collection Workbook - PathNet Common (IM Compartment Types, IM Storage Tracking Views-Units, IM Lab Locations, IM Specimen Tracking Locations, IM Inventory Letter Templates, IM Inventory Setup, IM Dispose Reasons)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3228	Data Collection Workbook - PathNet Anatomic Pathology (Order Prompts)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3229	Data Collection Workbook - PathNet Anatomic Pathology (Restrictions on Viewing)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3230	Data Collection Workbook - PathNet Anatomic Pathology (System Preferences)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3231	Data Collection Workbook - PathNet Anatomic Pathology (Ops Jobs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3232	Data Collection Workbook - PathNet Anatomic Pathology (Preference Manager)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3233	Data Collection Workbook - PathNet Anatomic Pathology (TAT Rules)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3234	Data Collection Workbook - PathNet Anatomic Pathology (Order Entry Formats)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3235	Data Collection Workbook - PathNet Anatomic Pathology (DX Coding - Custom Codes)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3236	Data Collection Workbook - PathNet Common (Physical Lab Layout - BEDROCK)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3237	Data Collection Workbook - PathNet Anatomic Pathology (remaining tabs)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3238	Data Collection Workbook - PathNet Anatomic Pathology (MDI - Instrument Protocols)	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3239	Data Collection Workbook - PathNet Common (AB&T QA Comments, AB&T AP Inv Summary M Page)	8 wks	Mon 7/15/13	Fri 9/6/13	8
3240	**BUILD**	**51.2 wks**	**Fri 12/21/12**	**Fri 12/13/13**	
3241	Work Package: PathNet AP - Accessioning Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3188,3191,3234
3242	Work Package: PathNet AP - Cytology Report Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3189,3192,3215,3216,
3243	Work Package: PathNet AP - Associated Assays	14 wks	Mon 9/9/13	Fri 12/13/13	3190
3244	Work Package: PathNet AP - Processing Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3193,3194,3224
3245	Work Package: PathNet AP - Common Report Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3195,3206,3207,3210,
3246	Work Package: PathNet AP - User Group, Cytology Security, and Service Resource Security	14 wks	Mon 9/9/13	Fri 12/13/13	3196,3201
3247	Work Package: PathNet AP - Specimen Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3197,3198,3202,3203,
3248	Work Package: PathNet AP - Synoptic Reporting	14 wks	Mon 9/9/13	Fri 12/13/13	3200
3249	Work Package: PathNet AP - Work Routing	14 wks	Mon 9/9/13	Fri 12/13/13	3224,3190
3250	Work Package: PathNet AP - Word Processing Templates	14 wks	Mon 9/9/13	Fri 12/13/13	3208
3251	Work Package: PathNet AP - Additional Data Collection	14 wks	Mon 9/9/13	Fri 12/13/13	3225,3227,3229,3233,
3252	Work Package: PathNet AP - AP Medical Imaging	14 wks	Mon 9/9/13	Fri 12/13/13	3226
3253	Work Package: PathNet AP - System/Operations Parameters	14 wks	Mon 9/9/13	Fri 12/13/13	3230,3231
3254	Work Package: PathNet AP - Lab Layout	14 wks	Mon 9/9/13	Fri 12/13/13	3236
3255	Work Package: PathNet AP - Load SNOMED Diagnostic Code	14 wks	Mon 9/9/13	Fri 12/13/13	3237
3256	Work Package: PathNet AP - Stainer Data Collection	14 wks	Mon 9/9/13	Fri 12/13/13	3238
3257	Work Package: PathNet AP - Slide Labeler Etcher	14 wks	Mon 9/9/13	Fri 12/13/13	3237
3258	Work Package: PathNet AP - Cassette Labeler	14 wks	Mon 9/9/13	Fri 12/13/13	3237
3259	Work Package: PathNet AP - AB&T	14 wks	Mon 9/9/13	Fri 12/13/13	3239
3260	Work Package: PathNet AP - Event Sets	14 wks	Mon 9/9/13	Fri 12/13/13	3195
3261	Work Package: PathNet AP - Orderables and Billing	14 wks	Fri 12/21/12	Thu 3/28/13	
3262	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3263	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
3264	QC Test: PathNet AP - Accessioning Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3241
3265	QC Test: PathNet AP - Cytology Report Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3242
3266	QC Test: PathNet AP - Processing Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3243
3267	QC Test: PathNet AP - Common Report Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3244
3268	QC Test: PathNet AP - User Group, Cytology Security, and Service Resource Security	3 wks	Mon 12/16/13	Fri 1/3/14	3245
3269	QC Test: PathNet AP - Specimen Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3246

ID	Task Name	Duration	Start	Finish	Predecessors
3270	QC Test: PathNet AP - Synoptic Reporting	3 wks	Mon 12/16/13	Fri 1/3/14	3247
3271	QC Test: PathNet AP - Work Routing	3 wks	Mon 12/16/13	Fri 1/3/14	3248
3272	QC Test: PathNet AP - Word Processing Templates	3 wks	Mon 12/16/13	Fri 1/3/14	3249
3273	QC Test: PathNet AP - Additional Data Collection	3 wks	Mon 12/16/13	Fri 1/3/14	3250
3274	QC Test: PathNet AP - AP Medical Imaging	3 wks	Mon 12/16/13	Fri 1/3/14	3251
3275	QC Test: PathNet AP - System/Operations Parameters	3 wks	Mon 12/16/13	Fri 1/3/14	3252
3276	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	**3253**
3277	Localize Unit Test Scripts - AP	5 wks	Mon 12/16/13	Fri 1/17/14	11
3278	Unit Test Scripts - AP	3 wks	Mon 1/20/14	Fri 2/7/14	3277
3279	Unit Test: PathNet AP - Accessioning Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3241,3278,3264
3280	Unit Test: PathNet AP - Cytology Report Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3242,3278,3265
3281	Unit Test: PathNet AP - Associated Assays	3 wks	Mon 2/10/14	Fri 2/28/14	3278,3243
3282	Unit Test: PathNet AP - Processing Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3244,3278,3266
3283	Unit Test: PathNet AP - Common Report Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3245,3278,3267
3284	Unit Test: PathNet AP - User Group, Cytology Security, and Service Resource Security	3 wks	Mon 2/10/14	Fri 2/28/14	3246,3278,3268
3285	Unit Test: PathNet AP - Specimen Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3247,3278,3269
3286	Unit Test: PathNet AP - Synoptic Reporting	3 wks	Mon 2/10/14	Fri 2/28/14	3248,3278,3270
3287	Unit Test: PathNet AP - Work Routing	3 wks	Mon 2/10/14	Fri 2/28/14	3278,3249,3271
3288	Unit Test: PathNet AP - Word Processing Templates	3 wks	Mon 2/10/14	Fri 2/28/14	3250,3278,3272
3289	Unit Test: PathNet AP - Additional Data Collection	3 wks	Mon 2/10/14	Fri 2/28/14	3251,3278,3273
3290	Unit Test: PathNet AP - AP Medical Imaging	3 wks	Mon 2/10/14	Fri 2/28/14	3252,3278,3274
3291	Unit Test: PathNet AP - System/Operations Parameters	3 wks	Mon 2/10/14	Fri 2/28/14	3253,3278,3275
3292	Unit Test: PathNet AP - Lab Layout	3 wks	Mon 2/10/14	Fri 2/28/14	3254,3278
3293	Unit Test: PathNet AP - Load SNOMED Diagnostic Code	3 wks	Mon 2/10/14	Fri 2/28/14	3255,3278
3294	Unit Test: PathNet AP - Stainer Data Collection	3 wks	Mon 2/10/14	Fri 2/28/14	3256,3278
3295	Unit Test: PathNet AP -Slide Labeler Etcher	3 wks	Mon 2/10/14	Fri 2/28/14	3257,3278
3296	Unit Test: PathNet AP - Cassette Labeler	3 wks	Mon 2/10/14	Fri 2/28/14	3258,3278
3297	Unit Test: PathNet AP - AB&T	3 wks	Mon 2/10/14	Fri 2/28/14	3259,3278
3298	Unit Test: PathNet AP - Event Sets	3 wks	Mon 2/10/14	Fri 2/28/14	3278,3260
3299	Unit Test: PathNet AP - Orderable & Billing	3 wks	Mon 12/16/13	Fri 1/3/14	3261
3300	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3301	Localize System Test Tracking and Scripts - AP	1 wk	Mon 12/16/13	Fri 12/20/13	11

ID	Task Name	Duration	Start	Finish	Predecessors
3302	First Draft System Test Scripts - AP	2 wks	Mon 12/23/13	Fri 1/3/14	3301
3303	Final System Test Scripts - AP	2 wks	Mon 12/23/13	Fri 1/3/14	3301
3304	Complete System Testing - AP	3 wks	Mon 1/6/14	Fri 1/24/14	3303
3305	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3306	Integration Test Scripts - AP	5 wks	Mon 12/16/13	Fri 1/17/14	11
3307	Complete Integration Testing - AP	5 wks	Mon 1/20/14	Fri 2/21/14	3306
3308	Milestone: Conclude All Testing - AP	0 days	Fri 2/28/14	Fri 2/28/14	3279,3280,3282,3283,
3309	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3310	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3311	Conversion Readiness Assessment - AP	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3312	Review & Update Conversion Cutover Plan (sent by IA) - AP	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3313	Complete the Turnover Process documentation - AP	5 wks	Mon 6/30/14	Fri 8/1/14	18
3314	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3315	Complete Post Conversion Assessment Workbook for AP	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3316	**PathNet Blood Bank**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
3317	**MIGRATION**	**59 wks**	**Mon 4/29/13**	**Fri 6/13/14**	
3318	Legacy Extract - PathNet Blood Bank Transfusion	2 wks	Mon 4/29/13	Fri 5/10/13	5
3319	Legacy Extract - PathNet Blood Bank Transfusion	2 wks	Mon 5/20/13	Fri 5/31/13	7
3320	Migration - PathNet® Blood Bank Transfusion Aliasing Workbook	3 wks	Mon 10/7/13	Fri 10/25/13	9
3321	Migration - PathNet® Blood Bank Transfusion Aliasing Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
3322	Stop Classic BUR program just before TH Upload	1 wk	Mon 6/9/14	Fri 6/13/14	18SS-2 wks
3323	Dispose of current BBT inventory in Classic and manually enter into Millennium	1 wk	Mon 6/9/14	Fri 6/13/14	18SS-2 wks
3324	**DESIGN**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3325	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
3326	Conduct Open House Demo Session - BloodBank	1 wk	Mon 4/29/13	Fri 5/3/13	5
3327	Complete BloodBank WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
3328	Complete Open House Scripts - BloodBank	4 wks	Fri 4/26/13	Fri 5/24/13	5
3329	Onsite Workflow Assessment - BloodBank	1 wk	Mon 5/20/13	Fri 5/24/13	7
3330	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3331	Data Collection Workbook - Project Start Up - Laboratory	8 wks	Mon 12/31/12	Fri 2/22/13	2
3332	Data Collection Workbook - PathNet Blood Bank Transfusion - Orderable Procedures	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3333	Data Collection Workbook - PathNet Blood Bank Transfusion - Resultable Procedures	8 wks	Mon 7/15/13	Fri 9/6/13	8
3334	Data Collection Workbook - PathNet Blood Bank Transfusion > Collection Requirements tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3335	Data Collection Workbook - PathNet Blood Bank Transfusion - Resultable Procedures/Interpretations tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3336	Data Collection Workbook - PathNet Blood Bank Transfusion - Resource Hierarchy/Routing tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3337	Data Collection Workbook - PathNet Blood Bank Transfusion > Antibody and Antigen Relationships	8 wks	Mon 7/15/13	Fri 9/6/13	8
3338	Data Collection Workbook - PathNet Blood Bank Transfusion > Allogeneic Blocking	8 wks	Mon 7/15/13	Fri 9/6/13	8
3339	Data Collection Workbook - PathNet Blood Bank Transfusion > Antibodies, Transfusion Requirements tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3340	Data Collection Workbook - PathNet Blood Bank Transfusion > Modifications, Pooling tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3341	Data Collection Workbook - PathNet Blood Bank Transfusion > Interpretations	8 wks	Mon 7/15/13	Fri 9/6/13	8
3342	Data Collection Workbook - PathNet Blood Bank Transfusion - Inventory Devices	8 wks	Mon 7/15/13	Fri 9/6/13	8
3343	Data Collection Workbook - PathNet Blood Bank Transfusion - Owner_Inv. Areas	8 wks	Mon 7/15/13	Fri 9/6/13	8
3344	Data Collection Workbook - PathNet Blood Bank Transfusion > ABORH Values	8 wks	Mon 7/15/13	Fri 9/6/13	8
3345	Data Collection Workbook - PathNet Blood Bank Transfusion - Preferences/Flex Specimen Pref tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3346	Data Collection Workbook - PathNet Blood Bank Transfusion > Products	8 wks	Mon 7/15/13	Fri 9/6/13	8
3347	Data Collection Workbook - PathNet Blood Bank Transfusion > Compatibility	8 wks	Mon 7/15/13	Fri 9/6/13	8
3348	Data Collection Workbook - PathNet Blood Bank Transfusion - QC Schedules/Reagent Relationships/Reasons/Troubleshooting/Manufactures/Lot Definitions	8 wks	Mon 7/15/13	Fri 9/6/13	8
3349	Data Collection Workbook - PathNet Blood Bank Transfusion > Reagent Cell Groups	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3350	Data Collection Workbook - PathNet Blood Bank Transfusion - Reasons/Reasons with Meaning tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3351	Data Collection Workbook - PathNet Blood Bank Transfusion > Testing Phases	8 wks	Mon 7/15/13	Fri 9/6/13	8
3352	Data Collection Workbook - PathNet Blood Bank Transfusion > Result Groups	8 wks	Mon 7/15/13	Fri 9/6/13	8
3353	Data Collection Workbook - PathNet Blood Bank Transfusion > Shipping Tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3354	Data Collection Workbook - PathNet Blood Bank Transfusion	8 wks	Mon 7/15/13	Fri 9/6/13	8
3355	Data Collection Workbook - PathNet Blood Bank Transfusion > Supplier Prefixes	8 wks	Mon 7/15/13	Fri 9/6/13	8
3356	Data Collection Workbook - PathNet Blood Bank Transfusion - Organizations tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3357	Data Collection Workbook - PathNet Blood Bank Transfusion - Tags and Labels tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3358	Data Collection Workbook - PathNet Blood Bank Transfusion > Valid Application States	8 wks	Mon 7/15/13	Fri 9/6/13	8
3359	Data Collection Workbook - PathNet Blood Bank Transfusion > Ops Jobs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3360	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
3361	Work Package: PathNet BBT - Order Catalog Synonyms	14 wks	Mon 9/9/13	Fri 12/13/13	3332
3362	Work Package: PathNet BBT - Associated Assays	14 wks	Mon 9/9/13	Fri 12/13/13	3333
3363	Work Package: PathNet BBT - Collections	14 wks	Mon 9/9/13	Fri 12/13/13	3334
3364	Work Package: PathNet BBT - Reference Ranges	14 wks	Mon 9/9/13	Fri 12/13/13	3335
3365	Work Package: PathNet BBT - Work Routing	14 wks	Mon 9/9/13	Fri 12/13/13	3336
3366	Work Package: PathNet BBT - AgAb Relationships	14 wks	Mon 9/9/13	Fri 12/13/13	3337
3367	Work Package: PathNet BBT - Allogeneic Blocking	14 wks	Mon 9/9/13	Fri 12/13/13	3338
3368	Work Package: PathNet BBT - Antibody and Transfusion Requirements	14 wks	Mon 9/9/13	Fri 12/13/13	3339
3369	Work Package: PathNet BBT - Modifications and Pooling	14 wks	Mon 9/9/13	Fri 12/13/13	3340
3370	Work Package: PathNet BBT - Interpretations	14 wks	Mon 9/9/13	Fri 12/13/13	3341
3371	Work Package: PathNet BBT - Inventory Devices	14 wks	Mon 9/9/13	Fri 12/13/13	3342
3372	Work Package: PathNet BBT - Owner and Inventory Areas	14 wks	Mon 9/9/13	Fri 12/13/13	3343
3373	Work Package: PathNet BBT - ABORh	14 wks	Mon 9/9/13	Fri 12/13/13	3344
3374	Work Package: PathNet BBT - Preferences	14 wks	Mon 9/9/13	Fri 12/13/13	3345
3375	Work Package: PathNet BBT - Products and Derivatives	14 wks	Mon 9/9/13	Fri 12/13/13	3346

ID	Task Name	Duration	Start	Finish	Predecessors
3376	Work Package: PathNet BBT - Pt Prod Compatibility	14 wks	Mon 9/9/13	Fri 12/13/13	3347
3377	Work Package: PathNet BBT - BBT QC	14 wks	Mon 9/9/13	Fri 12/13/13	3348
3378	Work Package: PathNet BBT - Reagent Cell Groups	14 wks	Mon 9/9/13	Fri 12/13/13	3349
3379	Work Package: PathNet BBT - Reasons and Reasons with Meaning	14 wks	Mon 9/9/13	Fri 12/13/13	3350
3380	Work Package: PathNet BBT - Required Testing Phases	14 wks	Mon 9/9/13	Fri 12/13/13	3351
3381	Work Package: PathNet BBT - Result Groups	14 wks	Mon 9/9/13	Fri 12/13/13	3352
3382	Work Package: PathNet BBT - Shipping	14 wks	Mon 9/9/13	Fri 12/13/13	3353
3383	Work Package: PathNet BBT - Special Testing	14 wks	Mon 9/9/13	Fri 12/13/13	3354
3384	Work Package: PathNet BBT - Supplier Prefixes	14 wks	Mon 9/9/13	Fri 12/13/13	3355
3385	Work Package: PathNet BBT - Suppliers and Manufacturers	14 wks	Mon 9/9/13	Fri 12/13/13	3356
3386	Work Package: PathNet BBT - Tags and Labels	14 wks	Mon 9/9/13	Fri 12/13/13	3357
3387	Work Package: PathNet BBT - Valid Application States	14 wks	Mon 9/9/13	Fri 12/13/13	3358
3388	Work Package: PathNet BBT - Product Aliasing	14 wks	Mon 7/15/13	Fri 10/18/13	8
3389	Work Package: PathNet BBT - Ops Jobs	14 wks	Mon 9/9/13	Fri 12/13/13	3359
3390	**TEST**	**19 wks**	**Mon 10/21/13**	**Fri 2/28/14**	
3391	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
3392	QC Test: PathNet BBT - Order Catalog Synonyms	3 wks	Mon 12/16/13	Fri 1/3/14	3361
3393	QC Test: PathNet BBT - Associated Assays	3 wks	Mon 12/16/13	Fri 1/3/14	3362
3394	QC Test: PathNet BBT - Collections	3 wks	Mon 12/16/13	Fri 1/3/14	3363
3395	QC Test: PathNet BBT - Reference Ranges	3 wks	Mon 12/16/13	Fri 1/3/14	3364
3396	QC Test: PathNet BBT - Work Routing	3 wks	Mon 12/16/13	Fri 1/3/14	3365
3397	QC Test: PathNet BBT - AgAb Relationships	3 wks	Mon 12/16/13	Fri 1/3/14	3366
3398	QC Test: PathNet BBT - Allogeneic Blocking	3 wks	Mon 12/16/13	Fri 1/3/14	3367
3399	QC Test: PathNet BBT - Antibody and Transfusion Requirements	3 wks	Mon 12/16/13	Fri 1/3/14	3368
3400	QC Test: PathNet BBT - Modifications and Pooling	3 wks	Mon 12/16/13	Fri 1/3/14	3369
3401	QC Test: PathNet BBT - Interpretations	3 wks	Mon 12/16/13	Fri 1/3/14	3370
3402	QC Test: PathNet BBT - Inventory Devices	3 wks	Mon 12/16/13	Fri 1/3/14	3371
3403	QC Test: PathNet BBT - Owner and Inventory Areas	3 wks	Mon 12/16/13	Fri 1/3/14	3372
3404	QC Test: PathNet BBT - ABORh	3 wks	Mon 12/16/13	Fri 1/3/14	3373
3405	QC Test: PathNet BBT - Preferences	3 wks	Mon 12/16/13	Fri 1/3/14	3374
3406	QC Test: PathNet BBT - Products and Derivatives	3 wks	Mon 12/16/13	Fri 1/3/14	3375
3407	QC Test: PathNet BBT - Pt Prod Compatibility	3 wks	Mon 12/16/13	Fri 1/3/14	3376
3408	QC Test: PathNet BBT - BBT QC	3 wks	Mon 12/16/13	Fri 1/3/14	3377

ID	Task Name	Duration	Start	Finish	Predecessors
3409	QC Test: PathNet BBT - Reagent Cell Groups	3 wks	Mon 12/16/13	Fri 1/3/14	3378
3410	QC Test: PathNet BBT - Reasons and Reasons with Meaning	3 wks	Mon 12/16/13	Fri 1/3/14	3379
3411	QC Test: PathNet BBT - Required Testing Phases	3 wks	Mon 12/16/13	Fri 1/3/14	3380
3412	QC Test: PathNet BBT - Result Groups	3 wks	Mon 12/16/13	Fri 1/3/14	3381
3413	QC Test: PathNet BBT - Shipping	3 wks	Mon 12/16/13	Fri 1/3/14	3382
3414	QC Test: PathNet BBT - Special Testing	3 wks	Mon 12/16/13	Fri 1/3/14	3383
3415	QC Test: PathNet BBT - Supplier Prefixes	3 wks	Mon 12/16/13	Fri 1/3/14	3384
3416	QC Test: PathNet BBT - Suppliers and Manufacturers	3 wks	Mon 12/16/13	Fri 1/3/14	3385
3417	QC Test: PathNet BBT - Tags and Labels	3 wks	Mon 12/16/13	Fri 1/3/14	3386
3418	QC Test: PathNet BBT - Valid Application States	3 wks	Mon 12/16/13	Fri 1/3/14	3387
3419	QC Test: PathNet BBT - Product Aliasing	3 wks	Mon 10/21/13	Fri 11/8/13	3388
3420	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3421	Localize Unit Test Scripts - BloodBank	5 wks	Mon 12/16/13	Fri 1/17/14	11
3422	Unit Test Scripts - BloodBank	3 wks	Mon 1/20/14	Fri 2/7/14	3421
3423	Unit Test: PathNet BBT - Order Catalog Synonyms	3 wks	Mon 2/10/14	Fri 2/28/14	3361,3422,3392
3424	Unit Test: PathNet BBT - Associated Assays	3 wks	Mon 2/10/14	Fri 2/28/14	3362,3422,3393
3425	Unit Test: PathNet BBT - Collections	3 wks	Mon 2/10/14	Fri 2/28/14	3363,3422,3394
3426	Unit Test: PathNet BBT - Reference Ranges	3 wks	Mon 2/10/14	Fri 2/28/14	3364,3422,3395
3427	Unit Test: PathNet BBT - Work Routing	3 wks	Mon 2/10/14	Fri 2/28/14	3365,3422,3396
3428	Unit Test: PathNet BBT - AgAb Relationships	3 wks	Mon 2/10/14	Fri 2/28/14	3366,3422,3397
3429	Unit Test: PathNet BBT - Allogeneic Blocking	3 wks	Mon 2/10/14	Fri 2/28/14	3367,3422,3398
3430	Unit Test: PathNet BBT - Antibody and Transfusion Requirements	3 wks	Mon 2/10/14	Fri 2/28/14	3368,3422,3399
3431	Unit Test: PathNet BBT - Modifications and Pooling	3 wks	Mon 2/10/14	Fri 2/28/14	3369,3422,3400
3432	Unit Test: PathNet BBT - Interpretations	3 wks	Mon 2/10/14	Fri 2/28/14	3370,3422,3401
3433	Unit Test: PathNet BBT - Inventory Devices	3 wks	Mon 2/10/14	Fri 2/28/14	3371,3422,3402
3434	Unit Test: PathNet BBT - Owner and Inventory Areas	3 wks	Mon 2/10/14	Fri 2/28/14	3372,3422,3403
3435	Unit Test: PathNet BBT - ABORh	3 wks	Mon 2/10/14	Fri 2/28/14	3373,3422,3404
3436	Unit Test: PathNet BBT - Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	3374,3422,3405
3437	Unit Test: PathNet BBT - Products and Derivatives	3 wks	Mon 2/10/14	Fri 2/28/14	3375,3422,3406
3438	Unit Test: PathNet BBT - Pt Prod Compatibility	3 wks	Mon 2/10/14	Fri 2/28/14	3376,3422,3407
3439	Unit Test: PathNet BBT - BBT QC	3 wks	Mon 2/10/14	Fri 2/28/14	3377,3422,3408
3440	Unit Test: PathNet BBT - Reagent Cell Groups	3 wks	Mon 2/10/14	Fri 2/28/14	3378,3422,3409
3441	Unit Test: PathNet BBT - Reasons and Reasons with Meaning	3 wks	Mon 2/10/14	Fri 2/28/14	3379,3422,3410

ID	Task Name	Duration	Start	Finish	Predecessors
3442	Unit Test: PathNet BBT - Required Testing Phases	3 wks	Mon 2/10/14	Fri 2/28/14	3380,3422,3411
3443	Unit Test: PathNet BBT - Result Groups	3 wks	Mon 2/10/14	Fri 2/28/14	3381,3422,3412
3444	Unit Test: PathNet BBT - Shipping	3 wks	Mon 2/10/14	Fri 2/28/14	3382,3422,3413
3445	Unit Test: PathNet BBT - Special Testing	3 wks	Mon 2/10/14	Fri 2/28/14	3383,3422,3414,3568
3446	Unit Test: PathNet BBT - Supplier Prefixes	3 wks	Mon 2/10/14	Fri 2/28/14	3384,3422,3415,3569
3447	Unit Test: PathNet BBT - Suppliers and Manufacturers	3 wks	Mon 2/10/14	Fri 2/28/14	3385,3422,3416,3570
3448	Unit Test: PathNet BBT - Tags and Labels	3 wks	Mon 2/10/14	Fri 2/28/14	3386,3422,3417,3571
3449	Unit Test: PathNet BBT - Valid Application States	3 wks	Mon 2/10/14	Fri 2/28/14	3387,3422,3418,3572
3450	Unit Test: PathNet BBT - Product Aliasing	3 wks	Mon 2/10/14	Fri 2/28/14	3388,3422,3419,3573
3451	Unit Test: PathNet BBT - Ops Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	3389,3422
3452	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3453	Localize System Test Tracking and Scripts - BloodBank	1 wk	Mon 12/16/13	Fri 12/20/13	11
3454	First Draft System Test Scripts - BloodBank	2 wks	Mon 12/23/13	Fri 1/3/14	3453
3455	Final System Test Scripts - BloodBank	2 wks	Mon 12/23/13	Fri 1/3/14	3453
3456	Complete System Testing - BloodBank	3 wks	Mon 1/6/14	Fri 1/24/14	3455
3457	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3458	Integration Test Scripts - BloodBank	5 wks	Mon 12/16/13	Fri 1/17/14	11
3459	Complete Integration Testing - BloodBank	5 wks	Mon 1/20/14	Fri 2/21/14	3458
3460	Milestone: Conclude All Testing - BloodBank	0 days	Fri 2/28/14	Fri 2/28/14	3423,3424,3425,3426,
3461	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3462	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3463	Conversion Readiness Assessment - BloodBank	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3464	Review & Update Conversion Cutover Plan (sent by IA) - BloodBank	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3465	Complete the Turnover Process documentation- BloodBank	5 wks	Mon 6/30/14	Fri 8/1/14	18
3466	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3467	Complete Post Conversion Assessment Workbook for BloodBank	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3468	**SOW #10 - Laboratory (PathNet GenLab / Handheld Specimen Collection)**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
3469	**Task 1 Conduct SOW Kick-off/ Mobilization**	**2 wks**	**Mon 5/20/13**	**Fri 5/31/13**	
3470	Subtask 1.1 Develop detailed Sub-Project Work Plan - Laboratory	1 wk	Mon 5/20/13	Fri 5/24/13	7
3471	Subtask 1.2 Conduct Initiation session for Laboratory Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
3472	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/27/13	Fri 5/31/13	3471
3473	**MIGRATION**	**26 wks**	**Mon 4/29/13**	**Fri 10/25/13**	
3474	Legacy Extract - PathNet General Laboratory Collection Information	2 wks	Mon 4/29/13	Fri 5/10/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
3475	Legacy Extract - PathNet General Laboratory Miscellaneous	2 wks	Mon 4/29/13	Fri 5/10/13	5
3476	Legacy Extract - PathNet General Laboratory DTA	2 wks	Mon 4/29/13	Fri 5/10/13	5
3477	Legacy Extract - PathNet General Laboratory DTA - Orderable Relationship	2 wks	Mon 4/29/13	Fri 5/10/13	5
3478	Legacy Extract - PathNet General Laboratory Order Catalog	2 wks	Mon 4/29/13	Fri 5/10/13	5
3479	Legacy Extract - PathNet General Laboratory Interval Orderables	2 wks	Mon 4/29/13	Fri 5/10/13	5
3480	Legacy Extract - PathNet General Laboratory Collection Information	2 wks	Mon 5/20/13	Fri 5/31/13	7
3481	Legacy Extract - PathNet General Laboratory Miscellaneous	2 wks	Mon 5/20/13	Fri 5/31/13	7
3482	Legacy Extract - PathNet General Laboratory DTA	2 wks	Mon 5/20/13	Fri 5/31/13	7
3483	Legacy Extract - PathNet General Laboratory DTA - Orderable Relationship	2 wks	Mon 5/20/13	Fri 5/31/13	7
3484	Legacy Extract - PathNet General Laboratory Order Catalog	2 wks	Mon 5/20/13	Fri 5/31/13	7
3485	Legacy Extract - PathNet General Laboratory Interval Orderables	2 wks	Mon 5/20/13	Fri 5/31/13	7
3486	Migration - PathNet General Laboratory Aliasing Workbook	3 wks	Mon 10/7/13	Fri 10/25/13	9
3487	Migration - PathNet General Laboratory Aliasing Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
3488	**Task 2 Conduct Current State Assessment (DESIGN)**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3489	**Establish Context for Design**	**7 wks**	**Fri 4/26/13**	**Fri 6/14/13**	
3490	Conduct Open House Demo Session - GenLab	1 wk	Mon 4/29/13	Fri 5/3/13	5
3491	Complete GenLab WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
3492	Complete Open House Scripts - GenLab	4 wks	Fri 4/26/13	Fri 5/24/13	5
3493	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
3494	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - GenLab)	1 wk	Mon 5/20/13	Fri 5/24/13	7
3495	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/10/13	Fri 6/14/13	3494FS+2 wks
3496	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3497	Data Collection Workbook - Project Start Up - Laboratory	8 wks	Mon 12/31/12	Fri 2/22/13	2
3498	Bedrock > Physical Lab Layout	8 wks	Mon 7/15/13	Fri 9/6/13	8
3499	Bedrock > Orders	8 wks	Mon 7/15/13	Fri 9/6/13	8
3500	Bedrock > Assays	8 wks	Mon 7/15/13	Fri 9/6/13	8
3501	Bedrock > Routing	8 wks	Mon 7/15/13	Fri 9/6/13	8
3502	Bedrock > Reference Ranges	8 wks	Mon 7/15/13	Fri 9/6/13	8
3503	Bedrock > Collection Requirements	8 wks	Mon 7/15/13	Fri 9/6/13	8
3504	Data Collection Workbook- PathNet General Laboratory- Caresets and Caresets Intervals tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3505	Data Collection Workbook- PathNet Common- Cancel Reasons tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3506	Data Collection Workbook- PathNet Common- Reasons Missed tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3507	Data Collection Workbook- PathNet Common- Collection Priority tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3508	Data Collection Workbook- PathNet General Laboratory- Collection Scheduling & Lists tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3509	Data Collection Workbook- PathNet General Laboratory- Collection Routes tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3510	Bedrock > Duplicate Checking	8 wks	Mon 7/15/13	Fri 9/6/13	8
3511	Data Collection Workbook- PathNet General Laboratory- Calculations tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3512	Data Collection Workbook- PathNet General Laboratory- Interpretations tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3513	Data Collection Workbook- PathNet General Laboratory- Interpretive Data tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3514	Data Collection Workbook- PathNet General Laboratory- Word Processing Templates tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3515	Data Collection Workbook- PathNet General Laboratory- Collection Templates tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3516	Data Collection Workbook- PathNet General Laboratory- Diff Keyboards tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3517	Data Collection Workbook- PathNet General Laboratory- Worklists tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3518	Data Collection Workbook- PathNet General Laboratory- multiple tabs beginning with "AV..."	8 wks	Mon 7/15/13	Fri 9/6/13	8
3519	Data Collection Workbook- PathNet Common- Turn Around Time Monitor tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3520	Data Collection Workbook- PathNet Common- Clin Val- Queues, Hierarchies, and GL Criteria tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3521	Data Collection Workbook- PathNet General Laboratory- Quality Control Tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3522	Data Collection Workbook- PathNet Common- Storage Track-Tray Types, Rack Types, Views & Loc, Rack Names, and Storage Times tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3523	Data Collection Workbook- PathNet General Laboratory Service Area DCW and NA-locations.exe tool	8 wks	Mon 7/15/13	Fri 9/6/13	8
3524	Data Collection Workbook- PathNet General Laboratory- Management Reports tab	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3525	Data Collection Workbook- Pathnet General Laboratory Operations	8 wks	Mon 7/15/13	Fri 9/6/13	8
3526	Data Collection Workbook- PathNet General Laboratory- Rules tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3527	Data Collection Workbook- PathNet Common- Label Printer Defaults tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3528	Data Collection Workbook- PathNet Common-Purge Criteria GL tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3529	Data Collection Workbook- PathNet General Lab Bedrock LOINC Mapping	8 wks	Mon 7/15/13	Fri 9/6/13	8
3530	Data Collection Workbook- PathNet General Laboratory- Ref Lab Order anc DTA Aliasing tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3531	Data Collection Workbook- PathNet Common- ESH Lab Event Set Hierarchy	8 wks	Mon 7/15/13	Fri 9/6/13	8
3532	Data Collection Workbook- PathNet Common- Specimen Login Template tab	8 wks	Mon 7/15/13	Fri 9/6/13	8
3533	Data Collection Workbook - PathNet® General Laboratory Specimen Management Handheld Devices	2 wks	Mon 7/15/13	Fri 7/26/13	8
3534	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
3535	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
3536	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	3535
3537	**Task 4 Conduct Design Review**	**9 wks**	**Mon 10/7/13**	**Fri 12/6/13**	
3538	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
3539	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/14/13	Fri 10/18/13	3538
3540	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/14/13	Fri 10/18/13	3538
3541	Subtask 4.4 Conduct Laboratory Workflow Workshop	1 wk	Mon 11/4/13	Fri 11/8/13	3540FS+2 wks
3542	Subtask 4.5 Develop Final Detailed Design Document	4 wks	Mon 11/11/13	Fri 12/6/13	3541
3543	**Task 5 Complete Partial System Build (BUILD)**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
3544	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 9/9/13	Fri 12/13/13	3499
3545	Work Package: PathNet GL - Orders	14 wks	Mon 9/9/13	Fri 12/13/13	3499
3546	Work Package: PathNet GL- Assays	14 wks	Mon 9/9/13	Fri 12/13/13	3500
3547	Work Package: PathNet GL - Routing	14 wks	Mon 9/9/13	Fri 12/13/13	3501
3548	Work Package: PathNet GL - Reference Ranges	14 wks	Mon 9/9/13	Fri 12/13/13	3502
3549	Work Package: PathNet GL - Collection Requirements	14 wks	Mon 9/9/13	Fri 12/13/13	3503
3550	Work Package: PathNet GL - Caresets	14 wks	Mon 9/9/13	Fri 12/13/13	3504
3551	Work Package: PathNet GL - Cancel Reasons	14 wks	Mon 9/9/13	Fri 12/13/13	3505

ID	Task Name	Duration	Start	Finish	Predecessors
3552	Work Package: PathNet GL - Missed Reasons	14 wks	Mon 9/9/13	Fri 12/13/13	3506
3553	Work Package: PathNet GL - Collection Priorities	14 wks	Mon 9/9/13	Fri 12/13/13	3507
3554	Work Package: PathNet GL- Collection List/Routes	14 wks	Mon 9/9/13	Fri 12/13/13	3508,3509
3555	Work Package: PathNet GL- Duplicate Checking	14 wks	Mon 9/9/13	Fri 12/13/13	3510
3556	Work Package: PathNet GL - Calculation	14 wks	Mon 9/9/13	Fri 12/13/13	3511
3557	Work Package: PathNet GL - Interpretations	14 wks	Mon 9/9/13	Fri 12/13/13	3512
3558	Work Package: PathNet GL - Interpretive Data	14 wks	Mon 9/9/13	Fri 12/13/13	3513
3559	Work Package: PathNet GL - Word Processing Templates	14 wks	Mon 9/9/13	Fri 12/13/13	3514
3560	Work Package: PathNet GL - Collection Templates	14 wks	Mon 9/9/13	Fri 12/13/13	3515
3561	Work Package: PathNet GL - Diff Keyboard	14 wks	Mon 9/9/13	Fri 12/13/13	3516
3562	Work Package: PathNet GL - Worklists	14 wks	Mon 9/9/13	Fri 12/13/13	3517
3563	Work Package: PathNet GL - Auto Verify	14 wks	Mon 9/9/13	Fri 12/13/13	3518
3564	Work Package: PathNet GL - Turn Around Time	14 wks	Mon 9/9/13	Fri 12/13/13	3519
3565	Work Package: PathNet GL - Clinical Validation	14 wks	Mon 9/9/13	Fri 12/13/13	3520
3566	Work Package: PathNet GL- Quality Control	14 wks	Mon 9/9/13	Fri 12/13/13	3521
3567	Work Package: PathNet GL - Storage Tracking	14 wks	Mon 9/9/13	Fri 12/13/13	3522
3568	Work Package: PathNet GL- Locations Build	14 wks	Mon 9/9/13	Fri 12/13/13	3523
3569	Work Package: PathNet GL -Management Reports	14 wks	Mon 9/9/13	Fri 12/13/13	3524
3570	Work Package: PathNet GL -Operations	14 wks	Mon 9/9/13	Fri 12/13/13	3525
3571	Work Package: PathNet GL -Rules	14 wks	Mon 9/9/13	Fri 12/13/13	3526
3572	Work Package: PathNet GL -Default Label Printing	14 wks	Mon 9/9/13	Fri 12/13/13	3527
3573	Work Package: PathNet GL -Purge Manager	14 wks	Mon 9/9/13	Fri 12/13/13	3528
3574	Work Package: PathNet GL - LOINC Code Assignment	14 wks	Mon 9/9/13	Fri 12/13/13	3529
3575	Work Package: PathNet GL- Multifacility Filtering	14 wks	Mon 7/15/13	Fri 10/18/13	8
3576	Work Package: PathNet GL- Ref Lab Aliasing	14 wks	Mon 9/9/13	Fri 12/13/13	3530
3577	Work Package: PathNet GL- Build Event Sets	14 wks	Mon 9/9/13	Fri 12/13/13	3531
3578	Work Package: PathNet GL- Accession Number Global Settings	14 wks	Mon 7/15/13	Fri 10/18/13	8
3579	Work Package: PathNet GL- Login Templates	14 wks	Mon 9/9/13	Fri 12/13/13	3532
3580	Work Package: PathNet HHSC	14 wks	Mon 7/29/13	Fri 11/1/13	3533
3581	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	3579
3582	**Task 6 Conduct System Validation**	**9 wks**	**Mon 12/16/13**	**Fri 2/14/14**	
3583	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
3584	Subtask 6.2 Conduct System Validation Session Follow-up	2 mons	Mon 12/23/13	Fri 2/14/14	3583

ID	Task Name	Duration	Start	Finish	Predecessors
3585	**Task 7 Complete Build of Laboratory and Conduct Unit and System Testing (TEST)**	**11 wks**	**Fri 12/13/13**	**Fri 2/28/14**	
3586	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	3581
3587	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	3586
3588	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
3589	QC Test: PathNet GL - Orders	3 wks	Mon 12/16/13	Fri 1/3/14	3545
3590	QC Test: PathNet GL - Routing	3 wks	Mon 12/16/13	Fri 1/3/14	3547
3591	QC Test: PathNet GL - Reference Ranges	3 wks	Mon 12/16/13	Fri 1/3/14	3548
3592	QC Test: PathNet GL - Collection Requirements	3 wks	Mon 12/16/13	Fri 1/3/14	3549
3593	QC Test: PathNet GL - Caresets	3 wks	Mon 12/16/13	Fri 1/3/14	3550
3594	QC Test: PathNet GL - Cancel Reasons	3 wks	Mon 12/16/13	Fri 1/3/14	3551
3595	QC Test: PathNet GL - Missed Reasons	3 wks	Mon 12/16/13	Fri 1/3/14	3552
3596	QC Test: PathNet GL - Collection Priorities	3 wks	Mon 12/16/13	Fri 1/3/14	3553
3597	QC Test: PathNet GL- Collection List/Routes	3 wks	Mon 12/16/13	Fri 1/3/14	3554
3598	QC Test: PathNet GL- Duplicate Checking	3 wks	Mon 12/16/13	Fri 1/3/14	3555
3599	QC Test: PathNet GL - Calculation	3 wks	Mon 12/16/13	Fri 1/3/14	3556
3600	QC Test: PathNet GL - Interpretations	3 wks	Mon 12/16/13	Fri 1/3/14	3557
3601	QC Test: PathNet GL - Interpretive Data	3 wks	Mon 12/16/13	Fri 1/3/14	3558
3602	QC Test: PathNet GL - Word Processing Templates	3 wks	Mon 12/16/13	Fri 1/3/14	3559
3603	QC Test: PathNet GL - Collection Templates	3 wks	Mon 12/16/13	Fri 1/3/14	3560
3604	QC Test: PathNet GL - Diff Keyboard	3 wks	Mon 12/16/13	Fri 1/3/14	3561
3605	QC Test: PathNet GL - Worklists	3 wks	Mon 12/16/13	Fri 1/3/14	3562
3606	QC Test: PathNet GL - Auto Verify	3 wks	Mon 12/16/13	Fri 1/3/14	3563
3607	QC Test: PathNet GL - Turn Around Time	3 wks	Mon 12/16/13	Fri 1/3/14	3564
3608	QC Test: PathNet GL - Clinical Validation	3 wks	Mon 12/16/13	Fri 1/3/14	3565
3609	QC Test: PathNet GL- Quality Control	3 wks	Mon 12/16/13	Fri 1/3/14	3566
3610	QC Test: PathNet GL - Storage Tracking	3 wks	Mon 12/16/13	Fri 1/3/14	3567
3611	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	**3568**
3612	Localize Unit Test Scripts - GenLab	5 wks	Mon 12/16/13	Fri 1/17/14	11,3569
3613	Unit Test Scripts - GenLab	3 wks	Mon 1/20/14	Fri 2/7/14	3612,3570
3614	Unit Test: PathNet GL - Orders	3 wks	Mon 2/10/14	Fri 2/28/14	3545,3613,3571,3589
3615	Unit Test: PathNet GL- Assays	3 wks	Mon 2/10/14	Fri 2/28/14	3546,3613,3572

ID	Task Name	Duration	Start	Finish	Predecessors
3616	Unit Test: PathNet GL - Routing	3 wks	Mon 2/10/14	Fri 2/28/14	3547,3613,3573,3590
3617	Unit Test: PathNet GL - Reference Ranges	3 wks	Mon 2/10/14	Fri 2/28/14	3548,3613,3591
3618	Unit Test: PathNet GL - Collection Requirements	3 wks	Mon 2/10/14	Fri 2/28/14	3549,3613,3592
3619	Unit Test: PathNet GL - Caresets	3 wks	Mon 2/10/14	Fri 2/28/14	3550,3613,3593
3620	Unit Test: PathNet GL - Cancel Reasons	3 wks	Mon 2/10/14	Fri 2/28/14	3551,3613,3594
3621	Unit Test: PathNet GL - Missed Reasons	3 wks	Mon 2/10/14	Fri 2/28/14	3552,3613,3595
3622	Unit Test: PathNet GL - Collection Priorities	3 wks	Mon 2/10/14	Fri 2/28/14	3553,3613,3596
3623	Unit Test: PathNet GL- Collection List/Routes	3 wks	Mon 2/10/14	Fri 2/28/14	3554,3613,3597
3624	Unit Test: PathNet GL- Duplicate Checking	3 wks	Mon 2/10/14	Fri 2/28/14	3555,3613,3598
3625	Unit Test: PathNet GL - Calculation	3 wks	Mon 2/10/14	Fri 2/28/14	3556,3613,3599,3610
3626	Unit Test: PathNet GL - Interpretations	3 wks	Mon 2/10/14	Fri 2/28/14	3557,3613,3600
3627	Unit Test: PathNet GL - Interpretive Data	3 wks	Mon 2/10/14	Fri 2/28/14	3558,3613,3601
3628	Unit Test: PathNet GL - Word Processing Templates	3 wks	Mon 2/10/14	Fri 2/28/14	3559,3613,3602
3629	Unit Test: PathNet GL - Collection Templates	3 wks	Mon 2/10/14	Fri 2/28/14	3560,3613,3603
3630	Unit Test: PathNet GL - Diff Keyboard	3 wks	Mon 2/10/14	Fri 2/28/14	3561,3613,3604
3631	Unit Test: PathNet GL - Worklists	3 wks	Mon 2/10/14	Fri 2/28/14	3562,3613,3605
3632	Unit Test: PathNet GL - Auto Verify	3 wks	Mon 2/10/14	Fri 2/28/14	3563,3613,3606
3633	Unit Test: PathNet GL - Turn Around Time	3 wks	Mon 2/10/14	Fri 2/28/14	3564,3613,3607
3634	Unit Test: PathNet GL - Clinical Validation	3 wks	Mon 2/10/14	Fri 2/28/14	3565,3613,3608
3635	Unit Test: PathNet GL- Quality Control	3 wks	Mon 2/10/14	Fri 2/28/14	3566,3613,3609
3636	Unit Test: PathNet GL - Storage Tracking	3 wks	Mon 2/10/14	Fri 2/28/14	3567,3613
3637	Unit Test: PathNet GL- Locations Build	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3638	Unit Test: PathNet GL -Management Reports	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3639	Unit Test: PathNet GL -Operations	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3640	Unit Test: PathNet GL -Rules	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3641	Unit Test: PathNet GL -Default Label Printing	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3642	Unit Test: PathNet GL -Purge Manager	3 wks	Mon 2/10/14	Fri 2/28/14	3613
3643	Unit Test: PathNet GL - LOINC Code Assignment	3 wks	Mon 2/10/14	Fri 2/28/14	3574,3613
3644	Unit Test: PathNet GL- Multifacility Filtering	3 wks	Mon 2/10/14	Fri 2/28/14	3575,3613
3645	Unit Test: PathNet GL- Ref Lab Aliasing	3 wks	Mon 2/10/14	Fri 2/28/14	3576,3613
3646	Unit Test: PathNet GL- Build Event Sets	3 wks	Mon 2/10/14	Fri 2/28/14	3577,3613
3647	Unit Test: PathNet GL- Accession Number Global Settings	3 wks	Mon 2/10/14	Fri 2/28/14	3578,3613
3648	Unit Test: PathNet GL- Login Templates	3 wks	Mon 2/10/14	Fri 2/28/14	3579,3613

ID	Task Name	Duration	Start	Finish	Predecessors
3649	Unit Test: PathNet HHSC	3 wks	Mon 2/10/14	Fri 2/28/14	3580,3613
3650	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3651	Localize System Test Tracking and Scripts - GenLab	1 wk	Mon 12/16/13	Fri 12/20/13	11
3652	First Draft System Test Scripts - GenLab	2 wks	Mon 12/23/13	Fri 1/3/14	3651
3653	Final System Test Scripts - GenLab	2 wks	Mon 12/23/13	Fri 1/3/14	3651
3654	Complete System Testing - GenLab	3 wks	Mon 1/6/14	Fri 1/24/14	3653
3655	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3656	Integration Test Scripts - GenLab	5 wks	Mon 12/16/13	Fri 1/17/14	11
3657	Complete Integration Testing - GenLab	5 wks	Mon 1/20/14	Fri 2/21/14	3656
3658	Milestone: Conclude All Testing - GenLab	0 days	Fri 2/28/14	Fri 2/28/14	3614,3615,3616,3617,
3659	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	3658FS-1 day
3660	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3661	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3662	Conversion Readiness Assessment - GenLab	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3663	Review & Update Conversion Cutover Plan (sent by IA) - GenLab	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3664	Complete the Turnover Process documentation- GenLab	5 wks	Mon 6/30/14	Fri 8/1/14	18
3665	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3666	Complete Post Conversion Assessment Workbook for GenLab	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3667	**PathNet HLA**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
3668	**MIGRATION**	**59 wks**	**Mon 4/29/13**	**Fri 6/13/14**	
3669	Legacy Extract - PathNet General Laboratory Order Catalog (Classic)	2 wks	Mon 4/29/13	Fri 5/10/13	5
3670	Legacy Extract - PathNet General Laboratory DTA (Classic)	2 wks	Mon 4/29/13	Fri 5/10/13	5
3671	Legacy Extract - PathNet General Laboratory DTA - Orderable Relationship (Classic)	2 wks	Mon 4/29/13	Fri 5/10/13	5
3672	Legacy Extract - PathNet General Laboratory Order Catalog (Classic)	2 wks	Mon 5/20/13	Fri 5/31/13	7
3673	Legacy Extract - PathNet General Laboratory DTA (Classic)	2 wks	Mon 5/20/13	Fri 5/31/13	7
3674	Legacy Extract - PathNet General Laboratory DTA - Orderable Relationship (Classic)	2 wks	Mon 5/20/13	Fri 5/31/13	7
3675	Release hold queue daily for HLA	1 wk	Mon 6/9/14	Fri 6/13/14	18SS-2 wks
3676	**DESIGN**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3677	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
3678	Conduct Open House Demo Session - HLA	1 wk	Mon 4/29/13	Fri 5/3/13	5
3679	Complete HLA WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
3680	Complete Open House Scripts - HLA	4 wks	Fri 4/26/13	Fri 5/24/13	5
3681	Onsite Workflow Assessment - HLA	1 wk	Mon 5/20/13	Fri 5/24/13	7
3682	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3683	Data Collection Workbook - Project Start Up - Laboratory	8 wks	Mon 12/31/12	Fri 2/22/13	2
3684	Data Collection Workbook - SR Non-HLA Data Collection Worksheets > Resource Hierarchy Data Collection	8 wks	Mon 7/15/13	Fri 9/6/13	8
3685	Data Collection Workbook - SR Non-HLA Data Collection Worksheets > Containers	8 wks	Mon 7/15/13	Fri 9/6/13	8
3686	Data Collection Workbook - SR Non-HLA Data Collection Worksheets > Collection Requirements	8 wks	Mon 7/15/13	Fri 9/6/13	8
3687	Data Collection Workbook - SR Non-HLA Data Collection Worksheets > Storage Tracking Views	8 wks	Mon 7/15/13	Fri 9/6/13	8
3688	Data Collection Workbook - SR HLA Data Collection Worksheets	8 wks	Mon 7/15/13	Fri 9/6/13	8
3689	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
3690	Work Package: PathNet HLA - Resource Hierarchy	14 wks	Mon 9/9/13	Fri 12/13/13	3684
3691	Work Package: PathNet HLA - Helix Case Build	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3692	Work Package: PathNet HLA - Containers	14 wks	Mon 9/9/13	Fri 12/13/13	3685
3693	Work Package: PathNet HLA - Collection Requirements	14 wks	Mon 9/9/13	Fri 12/13/13	3686
3694	Work Package: PathNet HLA - Assays	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3695	Work Package: PathNet HLA - Templates	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3696	Work Package: PathNet HLA - Orders	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3697	Work Package: PathNet HLA - Protocols	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3698	Work Package: PathNet HLA - Case Flags	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3699	Work Package: PathNet HLA - Worklists	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3700	Work Package: PathNet HLA - Clinical Validation	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3701	Work Package: PathNet HLA - HLA DB Tools codesets	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3702	Work Package: PathNet HLA - Work Routing	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3703	Work Package: PathNet HLA - Storage Tracking	14 wks	Mon 9/9/13	Fri 12/13/13	3687
3704	Work Package: PathNet HLA - Equations	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3705	Work Package: PathNet HLA - ASHII Dashboard custom CCL	14 wks	Mon 7/15/13	Fri 10/18/13	8
3706	Work Package: PathNet HLA - Reference Ranges	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3707	Work Package: PathNet HLA - Quality Control	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3708	Work Package: PathNet HLA - Charting	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3709	Work Package: PathNet HLA - Inventory	14 wks	Mon 9/9/13	Fri 12/13/13	3688

ID	Task Name	Duration	Start	Finish	Predecessors
3710	Work Package: PathNet HLA - Management Reports	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3711	Work Package: PathNet HLA - Charge Services	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3712	Work Package: PathNet HLA - Batching	14 wks	Mon 9/9/13	Fri 12/13/13	3688
3713	**TEST**	**19 wks**	**Mon 10/21/13**	**Fri 2/28/14**	
3714	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
3715	QC Test: PathNet HLA - Resource Hierarchy	3 wks	Mon 12/16/13	Fri 1/3/14	3690
3716	QC Test: PathNet HLA - Helix Case Build	3 wks	Mon 12/16/13	Fri 1/3/14	3691
3717	QC Test: PathNet HLA - Containers	3 wks	Mon 12/16/13	Fri 1/3/14	3692
3718	QC Test: PathNet HLA - Collection Requirements	3 wks	Mon 12/16/13	Fri 1/3/14	3693
3719	QC Test: PathNet HLA - Assays	3 wks	Mon 12/16/13	Fri 1/3/14	3694
3720	QC Test: PathNet HLA - Templates	3 wks	Mon 12/16/13	Fri 1/3/14	3695
3721	QC Test: PathNet HLA - Orders	3 wks	Mon 12/16/13	Fri 1/3/14	3696
3722	QC Test: PathNet HLA - Protocols	3 wks	Mon 12/16/13	Fri 1/3/14	3697
3723	QC Test: PathNet HLA - Case Flags	3 wks	Mon 12/16/13	Fri 1/3/14	3698
3724	QC Test: PathNet HLA - Worklists	3 wks	Mon 12/16/13	Fri 1/3/14	3699
3725	QC Test: PathNet HLA - Clinical Validation	3 wks	Mon 12/16/13	Fri 1/3/14	3700
3726	QC Test: PathNet HLA - HLA DB Tools codesets	3 wks	Mon 12/16/13	Fri 1/3/14	3701
3727	QC Test: PathNet HLA - Work Routing	3 wks	Mon 12/16/13	Fri 1/3/14	3702
3728	QC Test: PathNet HLA - Storage Tracking	3 wks	Mon 12/16/13	Fri 1/3/14	3703
3729	QC Test: PathNet HLA - Equations	3 wks	Mon 12/16/13	Fri 1/3/14	3704
3730	QC Test: PathNet HLA - ASHII Dashboard custom CCL	3 wks	Mon 10/21/13	Fri 11/8/13	3705
3731	QC Test: PathNet HLA - Reference Ranges	3 wks	Mon 12/16/13	Fri 1/3/14	3706
3732	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3733	Localize Unit Test Scripts - HLA	5 wks	Mon 12/16/13	Fri 1/17/14	11
3734	Unit Test Scripts - HLA	3 wks	Mon 1/20/14	Fri 2/7/14	3733
3735	Unit Test: PathNet HLA - Resource Hierarchy	3 wks	Mon 2/10/14	Fri 2/28/14	3690,3734,3715
3736	Unit Test: PathNet HLA - Helix Case Build	3 wks	Mon 2/10/14	Fri 2/28/14	3691,3734,3716
3737	Unit Test: PathNet HLA - Containers	3 wks	Mon 2/10/14	Fri 2/28/14	3692,3734,3717
3738	Unit Test: PathNet HLA - Collection Requirements	3 wks	Mon 2/10/14	Fri 2/28/14	3693,3734,3718
3739	Unit Test: PathNet HLA - Assays	3 wks	Mon 2/10/14	Fri 2/28/14	3694,3734,3719
3740	Unit Test: PathNet HLA - Templates	3 wks	Mon 2/10/14	Fri 2/28/14	3695,3734,3720
3741	Unit Test: PathNet HLA - Orders	3 wks	Mon 2/10/14	Fri 2/28/14	3696,3734,3721
3742	Unit Test: PathNet HLA - Protocols	3 wks	Mon 2/10/14	Fri 2/28/14	3697,3734,3722

ID	Task Name	Duration	Start	Finish	Predecessors
3743	Unit Test: PathNet HLA - Case Flags	3 wks	Mon 2/10/14	Fri 2/28/14	3698,3734,3723
3744	Unit Test: PathNet HLA - Worklists	3 wks	Mon 2/10/14	Fri 2/28/14	3699,3734,3724
3745	Unit Test: PathNet HLA - Clinical Validation	3 wks	Mon 2/10/14	Fri 2/28/14	3700,3734,3725
3746	Unit Test: PathNet HLA - HLA DB Tools codesets	3 wks	Mon 2/10/14	Fri 2/28/14	3701,3734,3726
3747	Unit Test: PathNet HLA - Work Routing	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3702,3727
3748	Unit Test: PathNet HLA - Storage Tracking	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3703,3728
3749	Unit Test: PathNet HLA - Equations	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3704,3729
3750	Unit Test: PathNet HLA - ASHII Dashboard custom CCL	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3705,3730
3751	Unit Test: PathNet HLA - Reference Ranges	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3706,3731
3752	Unit Test: PathNet HLA - Quality Control	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3707
3753	Unit Test: PathNet HLA - Charting	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3708
3754	Unit Test: PathNet HLA - Inventory	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3709
3755	Unit Test: PathNet HLA - Management Reports	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3710
3756	Unit Test: PathNet HLA - Charge Services	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3711
3757	Unit Test: PathNet HLA - Batching	3 wks	Mon 2/10/14	Fri 2/28/14	3734,3712
3758	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3759	Localize System Test Tracking and Scripts - HLA	1 wk	Mon 12/16/13	Fri 12/20/13	11
3760	First Draft System Test Scripts - HLA	2 wks	Mon 12/23/13	Fri 1/3/14	3759
3761	Final System Test Scripts - HLA	2 wks	Mon 12/23/13	Fri 1/3/14	3759
3762	Complete System Testing - HLA	3 wks	Mon 1/6/14	Fri 1/24/14	3761
3763	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3764	Integration Test Scripts - HLA	5 wks	Mon 12/16/13	Fri 1/17/14	11
3765	Complete Integration Testing - HLA	5 wks	Mon 1/20/14	Fri 2/21/14	3764
3766	Milestone: Conclude All Testing - HLA	0 days	Fri 2/28/14	Fri 2/28/14	3735,3736,3737,3738,
3767	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3768	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3769	Conversion Readiness Assessment - HLA	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3770	Review & Update Conversion Cutover Plan (sent by IA) - HLA	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3771	Complete the Turnover Process documentation- HLA	5 wks	Mon 6/30/14	Fri 8/1/14	18
3772	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3773	Complete Post Conversion Assessment Workbook for HLA	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3774	**PathNet Micro**	**90 wks**	**Mon 12/31/12**	**Fri 9/19/14**	
3775	**MIGRATION**	**59 wks**	**Mon 4/29/13**	**Fri 6/13/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
3776	Legacy Extract - PathNet® Microbiology DTA	2 wks	Mon 4/29/13	Fri 5/10/13	5
3777	Legacy Extract - PathNet® Microbiology DTA - Orderable Relationship	2 wks	Mon 4/29/13	Fri 5/10/13	5
3778	Legacy Extract - PathNet® Microbiology Order Catalog	2 wks	Mon 4/29/13	Fri 5/10/13	5
3779	Legacy Extract - PathNet® Microbiology Interval Orderables	2 wks	Mon 4/29/13	Fri 5/10/13	5
3780	Legacy Extract - PathNet® Microbiology Miscellaneous	2 wks	Mon 4/29/13	Fri 5/10/13	5
3781	Legacy Extract - PathNet® Microbiology DTA	2 wks	Mon 5/20/13	Fri 5/31/13	7
3782	Legacy Extract - PathNet® Microbiology DTA - Orderable Relationship	2 wks	Mon 5/20/13	Fri 5/31/13	7
3783	Legacy Extract - PathNet® Microbiology Order Catalog	2 wks	Mon 5/20/13	Fri 5/31/13	7
3784	Legacy Extract - PathNet® Microbiology Interval Orderables	2 wks	Mon 5/20/13	Fri 5/31/13	7
3785	Legacy Extract - PathNet® Microbiology Miscellaneous	2 wks	Mon 5/20/13	Fri 5/31/13	7
3786	Migration - PathNet® Microbiology Aliasing Workbook	3 wks	Mon 10/7/13	Fri 10/25/13	9
3787	Migration - PathNet® Microbiology Aliasing Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
3788	Release hold queue daily for Micro	1 wk	Mon 6/9/14	Fri 6/13/14	18SS-2 wks
3789	**DESIGN**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3790	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
3791	Conduct Open House Demo Session - Micro	1 wk	Mon 4/29/13	Fri 5/3/13	5
3792	Complete Micro WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
3793	Complete Open House Scripts - Micro	4 wks	Fri 4/26/13	Fri 5/24/13	5
3794	Onsite Workflow Assessment - Micro	1 wk	Mon 5/20/13	Fri 5/24/13	7
3795	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
3796	Data Collection Workbook - Project Start Up - Laboratory	8 wks	Mon 12/31/12	Fri 2/22/13	2
3797	Data Collection Workbook - PathNet Microbiology > Intrument Translations tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3798	Data Collection Workbook - PathNet Microbiology > Biochemical tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3799	Data Collection Workbook - PathNet Microbiology > Coded Responses, Group Coded Responses	8 wks	Mon 7/15/13	Fri 9/6/13	8
3800	Data Collection Workbook - PathNet Microbiology > Antibiotics, Susceptibility Panels, Susceptibility Valid Panels	8 wks	Mon 7/15/13	Fri 9/6/13	8
3801	Data Collection Workbook - PathNet Microbiology > Sensitivity Results, Valid Results by Antibiotic, First Level Sensitivity Interps	8 wks	Mon 7/15/13	Fri 9/6/13	8
3802	Data Collection Workbook - PathNet Microbiology > Abnormal Organisms and Coded Responses, Abnormal Susceptibility Results	8 wks	Mon 7/15/13	Fri 9/6/13	8
3803	Data Collection Workbook - PathNet Microbiology > Statistics tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
3804	Data Collection Workbook - PathNet Microbiology > Media, Default Media, Reports, Required Reports and Limits	8 wks	Mon 7/15/13	Fri 9/6/13	8
3805	Data Collection Workbook - PathNet Microbiology > ANG tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3806	Data Collection Workbook - PathNet Microbiology > Ops Jobs/Purge Jobs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3807	Data Collection Workbook - PathNet Microbiology > Source Hierarchy, Body Sites	8 wks	Mon 7/15/13	Fri 9/6/13	8
3808	Data Collection Workbook - PathNet Microbiology > Scripted Workups tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3809	Data Collection Workbook - PathNet Microbiology > Correlation Reporting/Clinical Validation	8 wks	Mon 7/15/13	Fri 9/6/13	8
3810	Data Collection Workbook - PathNet Microbiology > Interpretations	8 wks	Mon 7/15/13	Fri 9/6/13	8
3811	Data Collection Workbook - PathNet Microbiology > ESH	8 wks	Mon 7/15/13	Fri 9/6/13	8
3812	Data Collection Workbook - PathNet Microbiology > Breakpoint tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3813	Data Collection Workbook - PathNet Microbiology > Delta tabs	8 wks	Mon 7/15/13	Fri 9/6/13	8
3814	Data Collection Workbook - PathNet Microbiology > User Group	8 wks	Mon 7/15/13	Fri 9/6/13	8
3815	**BUILD**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
3816	Work Package: PathNet Micro - Instrument Translations - Organisms, Sources Panels, Antibiotics	14 wks	Mon 9/9/13	Fri 12/13/13	3797
3817	Work Package: PathNet Micro - Biochemical Procedures, Biochemcial Grouping	14 wks	Mon 9/9/13	Fri 12/13/13	3798
3818	Work Package: PathNet Micro - Coded Responses, Group Coded Responses	14 wks	Mon 9/9/13	Fri 12/13/13	3799
3819	Work Package: PathNet Micro - Antibiotics, Susceptibility Panels, Susceptibility Valid Panels	14 wks	Mon 9/9/13	Fri 12/13/13	3800
3820	Work Package: PathNet Micro - Sensitivity Results, Valid Results by Antibiotic, First Level Sensitivity Interps	14 wks	Mon 9/9/13	Fri 12/13/13	3801
3821	Work Package: PathNet Micro - Abnormal Organisms and Coded Responses, Abnormal Susceptibility Results	14 wks	Mon 9/9/13	Fri 12/13/13	3802
3822	Work Package: PathNet Micro - Statistics	14 wks	Mon 9/9/13	Fri 12/13/13	3803
3823	Work Package: PathNet Micro - Media, Default Media, Reports, Required Reports and Limits	14 wks	Mon 9/9/13	Fri 12/13/13	3804
3824	Work Package: PathNet Micro - ANG - Reports and Disqualifying Responses, Times	14 wks	Mon 9/9/13	Fri 12/13/13	3805
3825	Work Package: PathNet Micro - Ops Jobs/Purge Jobs	14 wks	Mon 9/9/13	Fri 12/13/13	3806

ID	Task Name	Duration	Start	Finish	Predecessors
3826	Work Package: PathNet Micro - Source Hierarchy, Body Sites	14 wks	Mon 9/9/13	Fri 12/13/13	3807
3827	Work Package: PathNet Micro - Scripted Workups	14 wks	Mon 9/9/13	Fri 12/13/13	3808
3828	Work Package: PathNet Micro - Correlation Reporting/Clinical Validation	14 wks	Mon 9/9/13	Fri 12/13/13	3809
3829	Work Package: PathNet Micro - 2nd Level Interpretations	14 wks	Mon 9/9/13	Fri 12/13/13	3810
3830	Work Package: PathNet Micro - Event Set Hierarchy	14 wks	Mon 9/9/13	Fri 12/13/13	3811
3831	Work Package: PathNet Micro - Breakpoint	14 wks	Mon 9/9/13	Fri 12/13/13	3812
3832	Work Package: PathNet Micro - Susceptibility Delta Checking	14 wks	Mon 9/9/13	Fri 12/13/13	3813
3833	Work Package: PathNet Micro - Micro User Group	14 wks	Mon 9/9/13	Fri 12/13/13	3814
3834	**TEST**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3835	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
3836	QC Test: PathNet Micro - Instrument Translations - Organisms, Sources, Panels, Antibiotics	3 wks	Mon 12/16/13	Fri 1/3/14	3816
3837	QC Test: PathNet Micro - Biochemical Procedures, Biochemcial Grouping	3 wks	Mon 12/16/13	Fri 1/3/14	3817
3838	QC Test: PathNet Micro - Coded Responses, Group Coded Responses	3 wks	Mon 12/16/13	Fri 1/3/14	3818
3839	QC Test: PathNet Micro - Antibiotics, Susceptibility Panels, Susceptibility Valid Panels	3 wks	Mon 12/16/13	Fri 1/3/14	3819
3840	QC Test: PathNet Micro - Sensitivity Results, Valid Results by Antibiotic, First Level Sensitivity Interps	3 wks	Mon 12/16/13	Fri 1/3/14	3820
3841	QC Test: PathNet Micro - Abnormal Organisms and Coded Responses, Abnormal Susceptibility Results	3 wks	Mon 12/16/13	Fri 1/3/14	3821
3842	QC Test: PathNet Micro - Media, Default Media, Reports, Required Reports and Limits	3 wks	Mon 12/16/13	Fri 1/3/14	3823
3843	QC Test: PathNet Micro - ANG - Reports and Disqualifying Responses, Times	3 wks	Mon 12/16/13	Fri 1/3/14	3824
3844	QC Test: PathNet Micro - Source Hierarchy, Body Sites	3 wks	Mon 12/16/13	Fri 1/3/14	3826
3845	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3846	Localize Unit Test Scripts - Micro	5 wks	Mon 12/16/13	Fri 1/17/14	11
3847	Unit Test Scripts - Micro	3 wks	Mon 1/20/14	Fri 2/7/14	3846
3848	Unit Test: PathNet Micro - Instrument Translations - Organisms, Sources, Panels, Antibiotics	3 wks	Mon 2/10/14	Fri 2/28/14	3816,3847,3836
3849	Unit Test: PathNet Micro - Biochemical Procedures, Biochemcial Grouping	3 wks	Mon 2/10/14	Fri 2/28/14	3817,3847,3837
3850	Unit Test: PathNet Micro - Coded Responses, Group Coded Responses	3 wks	Mon 2/10/14	Fri 2/28/14	3818,3847,3838

ID	Task Name	Duration	Start	Finish	Predecessors
3851	Unit Test: PathNet Micro - Antibiotics, Susceptibility Panels, Susceptibility Valid Panels	3 wks	Mon 2/10/14	Fri 2/28/14	3819,3847,3839
3852	Unit Test: PathNet Micro - Sensitivity Results, Valid Results by Antibiotic, First Level Sensitivity Interps	3 wks	Mon 2/10/14	Fri 2/28/14	3820,3847,3840
3853	Unit Test: PathNet Micro - Abnormal Organisms and Coded Responses, Abnormal Susceptibility Results	3 wks	Mon 2/10/14	Fri 2/28/14	3821,3847,3841
3854	Unit Test: PathNet Micro - Statistics	3 wks	Mon 2/10/14	Fri 2/28/14	3822,3847
3855	Unit Test: PathNet Micro - Media, Default Media, Reports, Required Reports and Limits	3 wks	Mon 2/10/14	Fri 2/28/14	3823,3847,3842
3856	Unit Test: PathNet Micro - ANG - Reports and Disqualifying Responses, Times	3 wks	Mon 2/10/14	Fri 2/28/14	3824,3847,3843
3857	Unit Test: PathNet Micro - Ops Jobs/Purge Jobs	3 wks	Mon 2/10/14	Fri 2/28/14	3825,3847
3858	Unit Test: PathNet Micro - Source Hierarchy, Body Sites	3 wks	Mon 2/10/14	Fri 2/28/14	3826,3847,3844
3859	Unit Test: PathNet Micro - Scripted Workups	3 wks	Mon 2/10/14	Fri 2/28/14	3827,3847
3860	Unit Test: PathNet Micro - Correlation Reporting/Clinical Validation	3 wks	Mon 2/10/14	Fri 2/28/14	3828,3847
3861	Unit Test: PathNet Micro - 2nd Level Interpretations	3 wks	Mon 2/10/14	Fri 2/28/14	3829,3847
3862	Unit Test: PathNet Micro - Event Set Hierarchy	3 wks	Mon 2/10/14	Fri 2/28/14	3830,3847
3863	Unit Test: PathNet Micro - Breakpoint	3 wks	Mon 2/10/14	Fri 2/28/14	3831,3847
3864	Unit Test: PathNet Micro - Susceptibility Delta Checking	3 wks	Mon 2/10/14	Fri 2/28/14	3832,3847
3865	Unit Test: PathNet Micro - Micro User Group	3 wks	Mon 2/10/14	Fri 2/28/14	3833,3847
3866	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3867	Localize System Test Tracking and Scripts - Micro	1 wk	Mon 12/16/13	Fri 12/20/13	11
3868	First Draft System Test Scripts - Micro	2 wks	Mon 12/23/13	Fri 1/3/14	3867
3869	Final System Test Scripts - Micro	2 wks	Mon 12/23/13	Fri 1/3/14	3867
3870	Complete System Testing - Micro	3 wks	Mon 1/6/14	Fri 1/24/14	3869
3871	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3872	Integration Test Scripts - Micro	5 wks	Mon 12/16/13	Fri 1/17/14	11
3873	Complete Integration Testing - Micro	5 wks	Mon 1/20/14	Fri 2/21/14	3872
3874	Milestone: Conclude All Testing - Micro	0 days	Fri 2/28/14	Fri 2/28/14	3848,3849,3850,3851,
3875	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3876	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3877	Conversion Readiness Assessment - Micro	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3878	Review & Update Conversion Cutover Plan (sent by IA) - Micro	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3879	Complete the Turnover Process documentation- Micro	5 wks	Mon 6/30/14	Fri 8/1/14	18

ID	Task Name	Duration	Start	Finish	Predecessors
3880	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3881	Complete Post Conversion Assessment Workbook for Micro	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3882	**PathNet Outreach**	**73 wks**	**Fri 4/26/13**	**Fri 9/19/14**	
3883	**DESIGN**	**19 wks**	**Fri 4/26/13**	**Fri 9/6/13**	
3884	**Establish Context for Design**	**4 wks**	**Fri 4/26/13**	**Fri 5/24/13**	
3885	Conduct Open House Demo Session - Outreach	1 wk	Mon 4/29/13	Fri 5/3/13	5
3886	Complete Outreach WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
3887	Complete Open House Scripts - Outreach	4 wks	Fri 4/26/13	Fri 5/24/13	5
3888	Onsite Workflow Assessment - Outreach	1 wk	Mon 5/20/13	Fri 5/24/13	7
3889	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
3890	Data Collection Workbook - PathNet Outreach Services	8 wks	Mon 7/15/13	Fri 9/6/13	8
3891	Data Collection Workbook - Core Organizations	8 wks	Mon 7/15/13	Fri 9/6/13	8
3892	**BUILD**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
3893	Work Package: PathNet Outreach - Client Organizations	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3894	Work Package: PathNet Outreach - Client Alias Pool Associations	14 wks	Mon 9/9/13	Fri 12/13/13	3891
3895	Work Package: PathNet Outreach - ROE Defaults	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3896	Work Package: PathNet Outreach - Quick Registration Conversation - Required and Optional Fields	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3897	Work Package: PathNet Outreach - Callback Queues - Rules built in ekmeditor	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3898	Work Package: PathNet Outreach - Calling Queue	14 wks	Mon 7/15/13	Fri 10/18/13	8
3899	Work Package: PathNet Outreach - Problem Queue	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3900	Work Package: PathNet Outreach - Outreach Synonyms	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3901	Work Package: PathNet Outreach - Order Entry Format Flexing	14 wks	Mon 7/15/13	Fri 10/18/13	8
3902	Work Package: PathNet Outreach - Medical Necessity Checking	14 wks	Mon 7/15/13	Fri 10/18/13	8
3903	Work Package: PathNet Outreach - Procedure Catalog Viewer	14 wks	Mon 7/15/13	Fri 10/18/13	8
3904	Work Package: PathNet Outreach - Requistion Form	14 wks	Mon 9/9/13	Fri 12/13/13	3890
3905	**TEST**	**19 wks**	**Mon 10/21/13**	**Fri 2/28/14**	
3906	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
3907	QC Test: PathNet Outreach - Client Organizations	3 wks	Mon 12/16/13	Fri 1/3/14	3893
3908	QC Test: PathNet Outreach - Client Alias Pool Associations	3 wks	Mon 12/16/13	Fri 1/3/14	3894
3909	QC Test: PathNet Outreach - ROE Defaults	3 wks	Mon 12/16/13	Fri 1/3/14	3895
3910	QC Test: PathNet Outreach - Quick Registration Conversation - Required and Optional Fields	3 wks	Mon 12/16/13	Fri 1/3/14	3896

ID	Task Name	Duration	Start	Finish	Predecessors
3911	QC Test: PathNet Outreach - Callback Queues - Rules built in ekmeditor	3 wks	Mon 12/16/13	Fri 1/3/14	3897
3912	QC Test: PathNet Outreach - Calling Queue	3 wks	Mon 10/21/13	Fri 11/8/13	3898
3913	QC Test: PathNet Outreach - Problem Queue	3 wks	Mon 12/16/13	Fri 1/3/14	3899
3914	QC Test: PathNet Outreach - Outreach Synonyms	3 wks	Mon 12/16/13	Fri 1/3/14	3900
3915	QC Test: PathNet Outreach - Order Entry Format Flexing	3 wks	Mon 10/21/13	Fri 11/8/13	3901
3916	QC Test: PathNet Outreach - Medical Necessity Checking	3 wks	Mon 10/21/13	Fri 11/8/13	3902
3917	QC Test: PathNet Outreach - Procedure Catalog Viewer	3 wks	Mon 10/21/13	Fri 11/8/13	3903
3918	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
3919	Localize Unit Test Scripts - Outreach	5 wks	Mon 12/16/13	Fri 1/17/14	11
3920	Unit Test Scripts - Outreach	3 wks	Mon 1/20/14	Fri 2/7/14	3919
3921	Unit Test: PathNet Outreach - Client Organizations	3 wks	Mon 2/10/14	Fri 2/28/14	3893,3920,3907
3922	Unit Test: PathNet Outreach - Client Alias Pool Associations	3 wks	Mon 2/10/14	Fri 2/28/14	3894,3920,3908
3923	Unit Test: PathNet Outreach - ROE Defaults	3 wks	Mon 2/10/14	Fri 2/28/14	3895,3920,3909
3924	Unit Test: PathNet Outreach - Quick Registration Conversation - Required and Optional Fields	3 wks	Mon 2/10/14	Fri 2/28/14	3896,3920,3910
3925	Unit Test: PathNet Outreach - Callback Queues - Rules built in ekmeditor	3 wks	Mon 2/10/14	Fri 2/28/14	3897,3920,3911
3926	Unit Test: PathNet Outreach - Calling Queue	3 wks	Mon 2/10/14	Fri 2/28/14	3898,3920,3912
3927	Unit Test: PathNet Outreach - Problem Queue	3 wks	Mon 2/10/14	Fri 2/28/14	3899,3920,3913
3928	Unit Test: PathNet Outreach - Outreach Synonyms	3 wks	Mon 2/10/14	Fri 2/28/14	3900,3920,3914
3929	Unit Test: PathNet Outreach - Order Entry Format Flexing	3 wks	Mon 2/10/14	Fri 2/28/14	3901,3920,3915
3930	Unit Test: PathNet Outreach - Medical Necessity Checking	3 wks	Mon 2/10/14	Fri 2/28/14	3902,3920,3916
3931	Unit Test: PathNet Outreach - Procedure Catalog Viewer	3 wks	Mon 2/10/14	Fri 2/28/14	3903,3920,3917
3932	Unit Test: PathNet Outreach - Requistion Form	3 wks	Mon 2/10/14	Fri 2/28/14	3904,3920
3933	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
3934	Localize System Test Tracking and Scripts - Outreach	1 wk	Mon 12/16/13	Fri 12/20/13	11
3935	First Draft System Test Scripts - Outreach	2 wks	Mon 12/23/13	Fri 1/3/14	3934
3936	Final System Test Scripts - Outreach	2 wks	Mon 12/23/13	Fri 1/3/14	3934
3937	Complete System Testing - Outreach	3 wks	Mon 1/6/14	Fri 1/24/14	3936
3938	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
3939	Integration Test Scripts - Outreach	5 wks	Mon 12/16/13	Fri 1/17/14	11
3940	Complete Integration Testing - Outreach	5 wks	Mon 1/20/14	Fri 2/21/14	3939
3941	Milestone: Conclude All Testing - Outreach	0 days	Fri 2/28/14	Fri 2/28/14	3921,3922,3923,3924,

ID	Task Name	Duration	Start	Finish	Predecessors
3942	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
3943	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
3944	Conversion Readiness Assessment - Outreach	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
3945	Review & Update Conversion Cutover Plan (sent by IA) - Outreach	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
3946	Complete the Turnover Process documentation- Outreach	5 wks	Mon 6/30/14	Fri 8/1/14	18
3947	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
3948	Complete Post Conversion Assessment Workbook for Outreach	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
3949	**SOW #11 - Pharmacy and Medication Management (PharmNet Inpatient)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
3950	**Task 1 Conduct SOW Kick-off/ Mobilization**	**22 wks**	**Mon 12/24/12**	**Fri 5/24/13**	
3951	Subtask 1.1 Develop detailed Sub-Project Work Plan - Pharmacy and Medication Management	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
3952	Subtask 1.2 Conduct Initiation session for Pharmacy and Medication Management Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
3953	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/20/13	Fri 5/24/13	7
3954	**DESIGN**	**32 wks**	**Fri 4/26/13**	**Fri 12/6/13**	
3955	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**8 wks**	**Fri 4/26/13**	**Fri 6/21/13**	
3956	Conduct Open House Demo Session - PharmNet Inpatient	1 wk	Mon 4/29/13	Fri 5/3/13	5
3957	Complete PharmNet Inpatient WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
3958	Complete Open House Scripts - PharmNet Inpatient	4 wks	Fri 4/26/13	Fri 5/24/13	5
3959	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
3960	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - PharmNet Inpatient)	1 wk	Mon 5/20/13	Fri 5/24/13	7
3961	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/17/13	Fri 6/21/13	3960FS+3 wks
3962	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
3963	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
3964	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	3963
3965	**Task 4 Conduct Design Review**	**9 wks**	**Mon 10/7/13**	**Fri 12/6/13**	
3966	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
3967	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/28/13	Fri 11/1/13	3966FS+2 wks
3968	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/28/13	Fri 11/1/13	3966FS+2 wks

ID	Task Name	Duration	Start	Finish	Predecessors
3969	Subtask 4.4 Conduct Pharmacy and Medication Management Workflow Workshop	1 wk	Mon 10/7/13	Fri 10/11/13	9
3970	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 12/2/13	Fri 12/6/13	3968FS+4 wks
3971	**Data Collection**	**8 wks**	**Mon 7/15/13**	**Fri 9/6/13**	
3972	Data Collection Workbook - PharmNet Inpatient - Common Data Collection	8 wks	Mon 7/15/13	Fri 9/6/13	8
3973	Data Collection Workbook - PharmNet Inpatient - Inpatient Data Collection	8 wks	Mon 7/15/13	Fri 9/6/13	8
3974	Data Collection Workbook - PharmNet Inpatient - Frequencies	8 wks	Mon 7/15/13	Fri 9/6/13	8
3975	Data Collection Workbook - PharmNet Inpatient IV Sets CPOE Order Sets and/or Bedrock: IV Sets and Medication Order Sets	8 wks	Mon 7/15/13	Fri 9/6/13	8
3976	Data Collection Workbook - PharmNet Inpatient - Dose Range Checking or Bedrock: Multum Dose Range Checking Update	8 wks	Mon 7/15/13	Fri 9/6/13	8
3977	Data Collection Workbook - PharmNet Inpatient - Advanced Dispense Routing	8 wks	Mon 7/15/13	Fri 9/6/13	8
3978	Data Collection Workbook - PharmNet Inpatient - Standard Rules	8 wks	Mon 7/15/13	Fri 9/6/13	8
3979	Data Collection Workbook - PharmNet Inpatient - Formulary Pass 1	8 wks	Mon 7/15/13	Fri 9/6/13	8
3980	Data Collection Workbook - PharmNet Inpatient - Formulary Pass 2	8 wks	Mon 7/15/13	Fri 9/6/13	8
3981	Data Collection Workbook - PharmNet Inpatient - Formulary Pass 4	8 wks	Mon 7/15/13	Fri 9/6/13	8
3982	Data Collection Workbook - PharmNet Inpatient - Therapeutic Substitutions	8 wks	Mon 7/15/13	Fri 9/6/13	8
3983	Data Collection Workbook - PharmNet Inpatient - Order Catalog Virtual View and Product Linking	8 wks	Mon 7/15/13	Fri 9/6/13	8
3984	**Task 5 Complete Partial System Build (BUILD)**	**22 wks**	**Mon 7/15/13**	**Fri 12/13/13**	
3985	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 7/15/13	Fri 10/18/13	8
3986	Work Package: PharmNet Both - System Information	14 wks	Mon 7/15/13	Fri 10/18/13	8
3987	Work Package: PharmNet Both - eMAR Task Preferences	14 wks	Mon 7/15/13	Fri 10/18/13	8
3988	Work Package: PharmNet Both - Multum Content	14 wks	Mon 7/15/13	Fri 10/18/13	8
3989	Work Package: PharmNet - Formulary Pass 1 (Formulary Creation Wizard Pass)	14 wks	Mon 9/9/13	Fri 12/13/13	3979
3990	Work Package: PharmNet - Preferences (Pre-Formulary Upload)	14 wks	Mon 7/15/13	Fri 10/18/13	8
3991	Work Package: PharmNet - Formulary Pass 2 (Identifiers Pass)	14 wks	Mon 9/9/13	Fri 12/13/13	3980
3992	Work Package: PharmNet - Common DCW: Units of Measure	14 wks	Mon 9/9/13	Fri 12/13/13	3972

ID	Task Name	Duration	Start	Finish	Predecessors
3993	Work Package: PharmNet - Common DCW: Dosage Forms	14 wks	Mon 9/9/13	Fri 12/13/13	3972
3994	Work Package: PharmNet - Common DCW: Routes of Administration	14 wks	Mon 9/9/13	Fri 12/13/13	3972
3995	Work Package: PharmNet - Inpatient DCW: Reason Codes	14 wks	Mon 9/9/13	Fri 12/13/13	3972
3996	Work Package: PharmNet - Inpatient DCW: Order Alerts	14 wks	Mon 9/9/13	Fri 12/13/13	3972
3997	Work Package: PharmNet - Inpatient DCW: Reference Translator	14 wks	Mon 9/9/13	Fri 12/13/13	3972
3998	Work package: PharmNet - Inpatient DCW: Dispense Categories	14 wks	Mon 9/9/13	Fri 12/13/13	3973
3999	Work Package: PharmNet - Inpatient DCW: PRN Reasons	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4000	Work Package: PharmNet - Inpatient DCW: Price Schedules	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4001	Work Package: PharmNet - Inpatient DCW: Label Comments	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4002	Work Package: PharmNet - Inpatient DCW: Fill Batches	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4003	Work Package: PharmNet - DCW: Frequencies	14 wks	Mon 9/9/13	Fri 12/13/13	3974
4004	Work Package: PharmNet - Formulary Pass 3 (Dispense and OE Default Pass)	14 wks	Mon 7/15/13	Fri 10/18/13	8
4005	Work Package: PharmNet Both - Route-Form Compatability	14 wks	Mon 7/15/13	Fri 10/18/13	8
4006	Work Package: PharmNet - Formulary Review/Audit (Before Final Pass)	14 wks	Mon 7/15/13	Fri 10/18/13	8
4007	Work Package: PharmNet - Formulary Pass 4 (Final Pass)	14 wks	Mon 9/9/13	Fri 12/13/13	3981
4008	Work Package: PharmNet Both - CCL Customization of Standard Report Output	14 wks	Mon 7/15/13	Fri 10/18/13	8
4009	Work Package: PharmNet Both - CCL Customization of Label Output	14 wks	Mon 7/15/13	Fri 10/18/13	8
4010	Work Package: PharmNet - DCW: Batch Report - MAR	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4011	Work Package: PharmNet - DCW: Batch Report - PMP	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4012	Work Package: PharmNet - DCW: Batch Report - SOR	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4013	Work Package: PharmNet - DCW: Batch Report - PCL	14 wks	Mon 9/9/13	Fri 12/13/13	3973
4014	Work Package: PharmNet - Database Flexing	14 wks	Mon 7/15/13	Fri 10/18/13	8
4015	Work Package: PharmNet - Preferences (Phadbtools)	14 wks	Mon 7/15/13	Fri 10/18/13	8
4016	Work Package: PharmNet - Integration: Charge Services	14 wks	Mon 7/15/13	Fri 10/18/13	8
4017	Work Package: PharmNet Both - IV Sets	14 wks	Mon 9/9/13	Fri 12/13/13	3975
4018	Work Package: PharmNet Both - OrderSets / PowerPlans	14 wks	Mon 7/15/13	Fri 10/18/13	8
4019	Work Package: PharmNet Both - Compounds	14 wks	Mon 7/15/13	Fri 10/18/13	8
4020	Work Package: PharmNet Both - Dose Range Checking	14 wks	Mon 9/9/13	Fri 12/13/13	3976
4021	Work Package: PharmNet - Service Resources	14 wks	Mon 7/15/13	Fri 10/18/13	8
4022	Work Package: PharmNet - Floorstock	14 wks	Mon 7/15/13	Fri 10/18/13	8
4023	Work Package: PharmNet - Advanced Dispense Routing	14 wks	Mon 9/9/13	Fri 12/13/13	3977

ID	Task Name	Duration	Start	Finish	Predecessors
4024	Work Package: PharmNet - Integration: Interfaces - Unit Based Cabinets	14 wks	Mon 7/15/13	Fri 10/18/13	8
4025	Work Package: PharmNet - Integration: Interfaces - Robot/Repackager	14 wks	Mon 7/15/13	Fri 10/18/13	8
4026	Work Package: PharmNet Both - Clinical Alerts (Discern Rules)	14 wks	Mon 9/9/13	Fri 12/13/13	3978
4027	Work Package: PharmNet Both - Clinical Alerts (Multum)	14 wks	Mon 9/9/13	Fri 12/13/13	3972
4028	Work Package: PharmNet - Reports: DiscernAnalytics	14 wks	Mon 7/15/13	Fri 10/18/13	8
4029	Work Package: PharmNet - Reports: ExplorerMenu	14 wks	Mon 7/15/13	Fri 10/18/13	8
4030	Work Package: PharmNet Both - Complex Medications	14 wks	Mon 7/15/13	Fri 10/18/13	8
4031	Work Package: PharmNet Both - Therapeutic Substitution	14 wks	Mon 9/9/13	Fri 12/13/13	3982
4032	Work Package: PharmNet Both - Integration: Core Position and Privileges	14 wks	Mon 7/15/13	Fri 10/18/13	8
4033	Work Package: PharmNet Both - Prescription Writer	14 wks	Mon 7/15/13	Fri 10/18/13	8
4034	Work Package: PharmNet Both - Integration: Physician Track	14 wks	Mon 7/15/13	Fri 10/18/13	8
4035	Work Package: PharmNet Both - Integration: Point of Care	14 wks	Mon 9/9/13	Fri 12/13/13	3983
4036	Work Package: PharmNet Both - Charge Services - Testing and Auditing	14 wks	Mon 7/15/13	Fri 10/18/13	8
4037	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	4035
4038	**Task 6 Conduct System Validation**	**9 wks**	**Mon 12/16/13**	**Fri 2/14/14**	
4039	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
4040	Subtask 6.2 Conduct System Validation Session Follow-up	2 mons	Mon 12/23/13	Fri 2/14/14	4039
4041	**Task 7 Complete Build of Pharmacy and Medication Management and Conduct Unit and System Testing (TEST)**	**19 wks**	**Mon 10/21/13**	**Fri 2/28/14**	
4042	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	4037
4043	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	4042
4044	**Quality Center Testing**	**11 wks**	**Mon 10/21/13**	**Fri 1/3/14**	
4045	QC Test: PharmNet - Common DCW: Units of Measure	3 wks	Mon 12/16/13	Fri 1/3/14	3992
4046	QC Test: PharmNet - Common DCW: Dosage Forms	3 wks	Mon 12/16/13	Fri 1/3/14	3993
4047	QC Test: PharmNet - Common DCW: Routes of Administration	3 wks	Mon 12/16/13	Fri 1/3/14	3994
4048	QC Test: PharmNet - Inpatient DCW: Order Alerts	3 wks	Mon 12/16/13	Fri 1/3/14	3996
4049	QC Test: PharmNet - Inpatient DCW: Dispense Categories	3 wks	Mon 12/16/13	Fri 1/3/14	3998
4050	QC Test: PharmNet - Inpatient DCW: PRN Reasons	3 wks	Mon 12/16/13	Fri 1/3/14	3999
4051	QC Test: PharmNet - Inpatient DCW: Price Schedules	3 wks	Mon 12/16/13	Fri 1/3/14	4000
4052	QC Test: PharmNet - Inpatient DCW: Label Comments	3 wks	Mon 12/16/13	Fri 1/3/14	4001
4053	QC Test: PharmNet - Inpatient DCW: Fill Batches	3 wks	Mon 12/16/13	Fri 1/3/14	4002
4054	QC Test: PharmNet - DCW: Frequencies	3 wks	Mon 12/16/13	Fri 1/3/14	4003

ID	Task Name	Duration	Start	Finish	Predecessors
4055	QC Test: PharmNet Both - CCL Customization of Label Output	3 wks	Mon 10/21/13	Fri 11/8/13	4009
4056	QC Test: PharmNet - Advanced Dispense Routing	3 wks	Mon 12/16/13	Fri 1/3/14	4023
4057	QC Test: PharmNet Both - Clinical Alerts (Discern Rules)	3 wks	Mon 12/16/13	Fri 1/3/14	4026
4058	QC Test: PharmNet Both - Complex Medications	3 wks	Mon 10/21/13	Fri 11/8/13	4030
4059	QC Test: PharmNet Both - Therapeutic Substitution	3 wks	Mon 12/16/13	Fri 1/3/14	4031
4060	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
4061	Localize Unit Test Scripts - PharmNet Inpatient	5 wks	Mon 12/16/13	Fri 1/17/14	11
4062	Unit Test Scripts - PharmNet Inpatient	3 wks	Mon 1/20/14	Fri 2/7/14	4061
4063	Unit Test: PharmNet Both - System Information	3 wks	Mon 2/10/14	Fri 2/28/14	3986,4062
4064	Unit Test: PharmNet Both - eMAR Task Preferences	3 wks	Mon 2/10/14	Fri 2/28/14	3987,4062
4065	Unit Test: PharmNet Both - Multum Content	3 wks	Mon 2/10/14	Fri 2/28/14	3988,4062
4066	Unit Test: PharmNet - Formulary Pass 1 (Formulary Creation Wizard Pass)	3 wks	Mon 2/10/14	Fri 2/28/14	3989,4062
4067	Unit Test: PharmNet - Preferences (Pre-Formulary Upload)	3 wks	Mon 2/10/14	Fri 2/28/14	3990,4062
4068	Unit Test: PharmNet - Formulary Pass 2 (Identifiers Pass)	3 wks	Mon 2/10/14	Fri 2/28/14	3991,4062
4069	Unit Test: PharmNet - Common DCW: Units of Measure	3 wks	Mon 2/10/14	Fri 2/28/14	3992,4062,4045
4070	Unit Test: PharmNet - Common DCW: Dosage Forms	3 wks	Mon 2/10/14	Fri 2/28/14	3993,4062,4046
4071	Unit Test: PharmNet - Common DCW: Routes of Administration	3 wks	Mon 2/10/14	Fri 2/28/14	3994,4062,4047
4072	Unit Test: PharmNet - Inpatient DCW: Reason Codes	3 wks	Mon 2/10/14	Fri 2/28/14	3995,4062
4073	Unit Test: PharmNet - Inpatient DCW: Order Alerts	3 wks	Mon 2/10/14	Fri 2/28/14	3996,4062,4048
4074	Unit Test: PharmNet - Inpatient DCW: Reference Translator	3 wks	Mon 2/10/14	Fri 2/28/14	3997,4062
4075	Unit Test: PharmNet - Inpatient DCW: Dispense Categories	3 wks	Mon 2/10/14	Fri 2/28/14	3998,4062,4049
4076	Unit Test: PharmNet - Inpatient DCW: PRN Reasons	3 wks	Mon 2/10/14	Fri 2/28/14	3999,4062,4050
4077	Unit Test: PharmNet - Inpatient DCW: Price Schedules	3 wks	Mon 2/10/14	Fri 2/28/14	4000,4062,4051
4078	Unit Test: PharmNet - Inpatient DCW: Label Comments	3 wks	Mon 2/10/14	Fri 2/28/14	4001,4062,4052
4079	Unit Test: PharmNet - Inpatient DCW: Fill Batches	3 wks	Mon 2/10/14	Fri 2/28/14	4002,4062,4053
4080	Unit Test: PharmNet - DCW: Frequencies	3 wks	Mon 2/10/14	Fri 2/28/14	4003,4062,4054
4081	Unit Test: PharmNet - Formulary Pass 3 (Dispense and OE Default Pass)	3 wks	Mon 2/10/14	Fri 2/28/14	4004,4062
4082	Unit Test: PharmNet Both - Route-Form Compatability	3 wks	Mon 2/10/14	Fri 2/28/14	4005,4062
4083	Unit Test: PharmNet - Formulary Review/Audit (Before Final Pass)	3 wks	Mon 2/10/14	Fri 2/28/14	4006,4062
4084	Unit Test: PharmNet - Formulary Pass 4 (Final Pass)	3 wks	Mon 2/10/14	Fri 2/28/14	4007,4062
4085	Unit Test: PharmNet Both - CCL Customization of Standard Report Output	3 wks	Mon 2/10/14	Fri 2/28/14	4008,4062

ID	Task Name	Duration	Start	Finish	Predecessors
4086	Unit Test: PharmNet Both - CCL Customization of Label Output	3 wks	Mon 2/10/14	Fri 2/28/14	4009,4062,4055
4087	Unit Test: PharmNet - DCW: Batch Report - MAR	3 wks	Mon 2/10/14	Fri 2/28/14	4010,4062
4088	Unit Test: PharmNet - DCW: Batch Report - PMP	3 wks	Mon 2/10/14	Fri 2/28/14	4011,4062
4089	Unit Test: PharmNet - DCW: Batch Report - SOR	3 wks	Mon 2/10/14	Fri 2/28/14	4012,4062
4090	Unit Test: PharmNet - DCW: Batch Report - PCL	3 wks	Mon 2/10/14	Fri 2/28/14	4013,4062
4091	Unit Test: PharmNet - Database Flexing	3 wks	Mon 2/10/14	Fri 2/28/14	4014,4062
4092	Unit Test: PharmNet - Preferences (Phadbtools)	3 wks	Mon 2/10/14	Fri 2/28/14	4015,4062
4093	Unit Test: PharmNet - Integration: Charge Services	3 wks	Mon 2/10/14	Fri 2/28/14	4016,4062
4094	Unit Test: PharmNet Both - IV Sets	3 wks	Mon 2/10/14	Fri 2/28/14	4017,4062
4095	Unit Test: PharmNet Both - OrderSets / PowerPlans	3 wks	Mon 2/10/14	Fri 2/28/14	4018,4062
4096	Unit Test: PharmNet Both - Compounds	3 wks	Mon 2/10/14	Fri 2/28/14	4019,4062
4097	Unit Test: PharmNet Both - Dose Range Checking	3 wks	Mon 2/10/14	Fri 2/28/14	4020,4062
4098	Unit Test: PharmNet - Service Resources	3 wks	Mon 2/10/14	Fri 2/28/14	4021,4062
4099	Unit Test: PharmNet - Floorstock	3 wks	Mon 2/10/14	Fri 2/28/14	4022,4062
4100	Unit Test: PharmNet - Advanced Dispense Routing	3 wks	Mon 2/10/14	Fri 2/28/14	4023,4062,4056
4101	Unit Test: PharmNet - Integration: Interfaces - Unit Based Cabinets	3 wks	Mon 2/10/14	Fri 2/28/14	4024,4062
4102	Unit Test: PharmNet - Integration: Interfaces - Robot/Repackager	3 wks	Mon 2/10/14	Fri 2/28/14	4025,4062
4103	Unit Test: PharmNet Both - Clinical Alerts (Discern Rules)	3 wks	Mon 2/10/14	Fri 2/28/14	4026,4062,4057
4104	Unit Test: PharmNet Both - Clinical Alerts (Multum)	3 wks	Mon 2/10/14	Fri 2/28/14	4027,4062
4105	Unit Test: PharmNet - Reports: DiscernAnalytics	3 wks	Mon 2/10/14	Fri 2/28/14	4028,4062
4106	Unit Test: PharmNet - Reports: ExplorerMenu	3 wks	Mon 2/10/14	Fri 2/28/14	4029,4062
4107	Unit Test: PharmNet Both - Complex Medications	3 wks	Mon 2/10/14	Fri 2/28/14	4030,4062,4058
4108	Unit Test: PharmNet Both - Therapeutic Substitution	3 wks	Mon 2/10/14	Fri 2/28/14	4031,4062,4059
4109	Unit Test: PharmNet Both - Integration: Core Position and Privileges	3 wks	Mon 2/10/14	Fri 2/28/14	4032,4062
4110	Unit Test: PharmNet Both - Prescription Writer	3 wks	Mon 2/10/14	Fri 2/28/14	4033,4062
4111	Unit Test: PharmNet Both - Integration: Physician Track	3 wks	Mon 2/10/14	Fri 2/28/14	4034,4062
4112	Unit Test: PharmNet Both - Integration: Point of Care	3 wks	Mon 2/10/14	Fri 2/28/14	4035,4062
4113	Unit Test: PharmNet Both - Charge Services - Testing and Auditing	3 wks	Mon 2/10/14	Fri 2/28/14	4036,4062
4114	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
4115	Localize System Test Tracking and Scripts - PharmNet Inpatient	1 wk	Mon 12/16/13	Fri 12/20/13	11
4116	First Draft System Test Scripts - PharmNet Inpatient	2 wks	Mon 12/23/13	Fri 1/3/14	4115
4117	Final System Test Scripts - PharmNet Inpatient	2 wks	Mon 12/23/13	Fri 1/3/14	4115
4118	Complete System Testing - PharmNet Inpatient	3 wks	Mon 1/6/14	Fri 1/24/14	4117

ID	Task Name	Duration	Start	Finish	Predecessors
4119	**Integration Testing**	**10 wks**	**Mon 12/16/13**	**Fri 2/21/14**	
4120	Integration Test Scripts - PharmNet Inpatient	5 wks	Mon 12/16/13	Fri 1/17/14	11
4121	Complete Integration Testing - PharmNet Inpatient	5 wks	Mon 1/20/14	Fri 2/21/14	4120
4122	Milestone: Conclude All Testing - PharmNet Inpatient	0 days	Fri 2/28/14	Fri 2/28/14	4063,4064,4065,4066,
4123	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	4122FS-1 day
4124	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
4125	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
4126	Conversion Readiness Assessment - PharmNet Inpatient	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4127	Review & Update Conversion Cutover Plan (sent by IA) - PharmNet Inpatient	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
4128	Complete the Turnover Process documentation- PharmNet Inpatient	5 wks	Mon 6/30/14	Fri 8/1/14	18
4129	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
4130	Complete Post Conversion Assessment Workbook for PharmNet Inpatient	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4131	**SOW #9 - Radiology (RadNet / Mammography)**	**91 wks**	**Mon 12/24/12**	**Fri 9/19/14**	
4132	**Task 1 Conduct SOW Kick-off/ Mobilization**	**23 wks**	**Mon 12/24/12**	**Fri 5/31/13**	
4133	Subtask 1.1 Develop detailed Sub-Project Work Plan - Radiology	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
4134	Subtask 1.2 Conduct Initiation session for Radiology Workgroup	1 wk	Mon 5/20/13	Fri 5/24/13	7
4135	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/27/13	Fri 5/31/13	7FS+1 wk
4136	**MIGRATION**	**60 wks**	**Mon 4/29/13**	**Fri 6/20/14**	
4137	Legacy Extract - RadNet DTA Orderable Relationship	2 wks	Mon 4/29/13	Fri 5/10/13	5
4138	Legacy Extract - RadNet Order Catalog	2 wks	Mon 4/29/13	Fri 5/10/13	5
4139	Legacy Extract - RadNet Bill Only Procedures	2 wks	Mon 4/29/13	Fri 5/10/13	5
4140	Legacy Extract - RadNet Service Area	2 wks	Mon 4/29/13	Fri 5/10/13	5
4141	Legacy Extract - RadNet Service Resource Assignment - Order Routing	2 wks	Mon 4/29/13	Fri 5/10/13	5
4142	Legacy Extract - RadNet Service Resources	2 wks	Mon 4/29/13	Fri 5/10/13	5
4143	Legacy Extract - RadNet Miscellaneous	2 wks	Mon 4/29/13	Fri 5/10/13	5
4144	Legacy Extract - RadNet DTA Orderable Relationship	2 wks	Mon 5/20/13	Fri 5/31/13	7
4145	Legacy Extract - RadNet Order Catalog	2 wks	Mon 5/20/13	Fri 5/31/13	7
4146	Legacy Extract - RadNet Bill Only Procedures	2 wks	Mon 5/20/13	Fri 5/31/13	7
4147	Legacy Extract - RadNet Service Area	2 wks	Mon 5/20/13	Fri 5/31/13	7
4148	Legacy Extract - RadNet Service Resource Assignment - Order Routing	2 wks	Mon 5/20/13	Fri 5/31/13	7
4149	Legacy Extract - RadNet Service Resources	2 wks	Mon 5/20/13	Fri 5/31/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
4150	Legacy Extract - RadNet Miscellaneous	2 wks	Mon 5/20/13	Fri 5/31/13	7
4151	Migration - MRN Group and Alias Pool Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
4152	Migration - RadNet® Aliasing Workbook	2 wks	Mon 10/7/13	Fri 10/18/13	9
4153	Release hold queue daily for Radiology	1 wk	Mon 6/16/14	Fri 6/20/14	18FS-2 wks
4154	**DESIGN**	**48 wks**	**Mon 12/31/12**	**Fri 11/29/13**	
4155	**Task 2 Conduct Current State Assessment (Establish Context for Design)**	**5 wks**	**Fri 4/26/13**	**Fri 5/31/13**	
4156	Conduct Open House Demo Session - RadNet	1 wk	Mon 4/29/13	Fri 5/3/13	5
4157	Complete RadNet WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4158	Complete RadNet Clerical WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4159	Complete RadNet Film Librarian WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4160	Complete RadNet Physician WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4161	Complete RadNet Technologist WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4162	Complete RadNet Mammography Technologist WBT	4 wks	Mon 4/29/13	Fri 5/24/13	5
4163	Complete Open House Scripts - RadNet	4 wks	Fri 4/26/13	Fri 5/24/13	5
4164	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
4165	Subtask 2.2 Conduct Workflow Assessment (Onsite Workflow Assessment - RadNet)	1 wk	Mon 5/20/13	Fri 5/24/13	7
4166	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 5/27/13	Fri 5/31/13	4165
4167	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/15/13**	**Fri 11/8/13**	
4168	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/15/13	Fri 7/19/13	8
4169	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/22/13	Fri 11/8/13	4168
4170	**Task 4 Conduct Design Review**	**8 wks**	**Mon 10/7/13**	**Fri 11/29/13**	
4171	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 10/7/13	Fri 10/11/13	9
4172	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/21/13	Fri 10/25/13	4171FS+1 wk
4173	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/21/13	Fri 10/25/13	4171FS+1 wk
4174	Subtask 4.4 Conduct Radiology Workflow Workshop	1 wk	Mon 10/28/13	Fri 11/1/13	4173
4175	Subtask 4.5 Develop Final Detailed Design Document	4 wks	Mon 11/4/13	Fri 11/29/13	4174
4176	**Data Collection**	**36 wks**	**Mon 12/31/12**	**Fri 9/6/13**	
4177	Data Collection Workbook - Project Start Up - Radiology	8 wks	Mon 12/31/12	Fri 2/22/13	2
4178	Data Collection Workbook - RadNet® Tabs: Bill Only Items	8 wks	Mon 7/15/13	Fri 9/6/13	8
4179	Data Collection Workbook - RadNet® Tabs: Bill Only Association	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
4180	Data Collection Workbook - RadNet® Tabs: Borrowers and Lenders	8 wks	Mon 7/15/13	Fri 9/6/13	8
4181	Bedrock -->RadNet--> Clinical Event Creation	8 wks	Mon 7/15/13	Fri 9/6/13	8
4182	Data Collection Workbook - RadNet® Tabs: Film Usage by Procedure	8 wks	Mon 7/15/13	Fri 9/6/13	8
4183	Data Collection Workbook - RadNet® Tabs: Folder Types	8 wks	Mon 7/15/13	Fri 9/6/13	8
4184	Data Collection Workbook - RadNet® Tabs: Library Groups; Libraries and Tracking Points	8 wks	Mon 7/15/13	Fri 9/6/13	8
4185	Data Collection Workbook - RadNet® Mammography Tabs: Mammography Default Recall Intervalls	8 wks	Mon 7/15/13	Fri 9/6/13	8
4186	Data Collection Workbook - RadNet® Tabs: Bill Only Category	8 wks	Mon 7/15/13	Fri 9/6/13	8
4187	Data Collection Workbook - RadNet® Tabs: Code Set Filtering	8 wks	Mon 7/15/13	Fri 9/6/13	8
4188	Data Collection Workbook - RadNet® Tabs: Exams for Document Meds; Medication Lists and Catagories; Document Medication Fields	8 wks	Mon 7/15/13	Fri 9/6/13	8
4189	Data Collection Workbook - RadNet® Tabs: Protocols; Protocol Association	8 wks	Mon 7/15/13	Fri 9/6/13	8
4190	Data Collection Workbook - RadNet® Tabs: Subspecialty	8 wks	Mon 7/15/13	Fri 9/6/13	8
4191	Data Collection Workbook - RadNet® Printing and Alerts Tabs: RadNet Rules and Alerts;Data Collection Workbook - RadNet® Tabs: Order Catalog	8 wks	Mon 7/15/13	Fri 9/6/13	8
4192	Data Collection Workbook - RadNet® Mammography Tabs: Notification Letter Association	8 wks	Mon 7/15/13	Fri 9/6/13	8
4193	Data Collection Workbook - RadNet® Tabs: Exam Room by Procedure for all modalities(NM) or Bedrock RadNet-->Work Routing	8 wks	Mon 7/15/13	Fri 9/6/13	8
4194	Data Collection Workbook - RadNet® Tabs: Order Formats	8 wks	Mon 7/15/13	Fri 9/6/13	8
4195	Data Collection Workbook - RadNet® Tabs: Order Catalog	8 wks	Mon 7/15/13	Fri 9/6/13	8
4196	Data Collection Workbook - RadNet® Tabs: Institution, Department, Section, Exam Rooms, Subsection	8 wks	Mon 7/15/13	Fri 9/6/13	8
4197	Data Collection Workbook - RadNet® Tabs: Procedure Classification	8 wks	Mon 7/15/13	Fri 9/6/13	8
4198	Data Collection Workbook - RadNet® Tabs: Procedure Groups	8 wks	Mon 7/15/13	Fri 9/6/13	8
4199	Data Collection Workbook - RadNet® Tabs: Radiologist Proxy	8 wks	Mon 7/15/13	Fri 9/6/13	8
4200	Data Collection Workbook - RadNet® Tabs: Reason for Exam	8 wks	Mon 7/15/13	Fri 9/6/13	8
4201	Data Collection Workbook - RadNet® Tabs: Reason for Exam Association	8 wks	Mon 7/15/13	Fri 9/6/13	8
4202	Data Collection Workbook - RadNet® Tabs: Replace Group	8 wks	Mon 7/15/13	Fri 9/6/13	8
4203	Data Collection Workbook - RadNet® Tabs: Service Areas	8 wks	Mon 7/15/13	Fri 9/6/13	8
4204	Data Collection Workbook - RadNet® Tabs: Signature Line	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
4205	Data Collection Workbook - RadNet® Tabs: Technical Comment Format Relation	8 wks	Mon 7/15/13	Fri 9/6/13	8
4206	Data Collection Workbook - RadNet® Tabs: Technical Comments Fields	8 wks	Mon 7/15/13	Fri 9/6/13	8
4207	Data Collection Workbook - RadNet® Tabs: Technical Comments Formats	8 wks	Mon 7/15/13	Fri 9/6/13	8
4208	Data Collection Workbook - RadNet® Tabs: Associate Templates	8 wks	Mon 7/15/13	Fri 9/6/13	8
4209	Data Collection Workbook - RadNet® Tabs: User Group_Role Assignment	8 wks	Mon 7/15/13	Fri 9/6/13	8
4210	Data Collection Workbook - RadNet® Tabs: Word Processing Templates	8 wks	Mon 7/15/13	Fri 9/6/13	8
4211	Data Collection Workbook - RadNet® Tabs: Exam Room by Procedure for all modalities(CT,IR,NM,MA,US,MRI,XR) or Bedrock RadNet-->Work Routing	8 wks	Mon 7/15/13	Fri 9/6/13	8
4212	Data Collection Workbook - RadNet® Tabs: Mpages	8 wks	Mon 7/15/13	Fri 9/6/13	8
4213	Data Collection Workbook - RadNet® Tabs: User Group_Role Assignment	8 wks	Mon 7/15/13	Fri 9/6/13	8
4214	Data Collection Workbook - RadNet® Tabs: Interesting Case Subclass	8 wks	Mon 7/15/13	Fri 9/6/13	8
4215	Data Collection Workbook - RadNet® Tabs: Procedure Critiques	8 wks	Mon 7/15/13	Fri 9/6/13	8
4216	Data Collection Workbook - RadNet® Tabs: Radiology Resident Signout	8 wks	Mon 7/15/13	Fri 9/6/13	8
4217	Data Collection Workbook - RadNet® Tabs: Relevant Prior Reports	8 wks	Mon 7/15/13	Fri 9/6/13	8
4218	Data Collection Workbook - RadNet® Tabs: Worklist Maintenance	8 wks	Mon 7/15/13	Fri 9/6/13	8
4219	Data Collection Workbook - RadNet® Tabs: Service Resource Security	8 wks	Mon 7/15/13	Fri 9/6/13	8
4220	Data Collection Workbook - RadNet® Tabs: Worklist Device Maintenance	8 wks	Mon 7/15/13	Fri 9/6/13	8
4221	Data Collection Workbook - RadNet® Printing and Alerts Tabs: RadNet Operation Reports	8 wks	Mon 7/15/13	Fri 9/6/13	8
4222	Data Collection Workbook - RadNet® Printing and Alerts Tabs: Printing Packet Components; Design Layout for Packet .prg's	8 wks	Mon 7/15/13	Fri 9/6/13	8
4223	Data Collection Workbook - RadNet® Mammography Tabs: Mammography Follow-up	8 wks	Mon 7/15/13	Fri 9/6/13	8
4224	Data Collection Workbook - RadNet® Mammography Tabs: Patient History Medical Fields	8 wks	Mon 7/15/13	Fri 9/6/13	8
4225	Data Collection Workbook - RadNet® Mammography Tabs: Study Part 1	8 wks	Mon 7/15/13	Fri 9/6/13	8
4226	Data Collection Workbook - RadNet® Mammography Tabs: Study Part 2	8 wks	Mon 7/15/13	Fri 9/6/13	8
4227	Data Collection Workbook - RadNet® Mammography Tabs: Pathology	8 wks	Mon 7/15/13	Fri 9/6/13	8
4228	Data Collection Workbook - RadNet® Mammography Tabs: Follow-up Letter Text	8 wks	Mon 7/15/13	Fri 9/6/13	8
4229	Data Collection Workbook - RadNet® Mammography Tabs: Encounter Pathway Assoc	8 wks	Mon 7/15/13	Fri 9/6/13	8

ID	Task Name	Duration	Start	Finish	Predecessors
4230	Data Collection Workbook - RadNet® Orderables for Bedrock	8 wks	Mon 7/15/13	Fri 9/6/13	8
4231	Data Collection Workbook - RadNet® History Upload Aliasing Tabs: Millennium Order Catalog; Historical Orders	8 wks	Mon 7/15/13	Fri 9/6/13	8
4232	Data Collection Workbook - Mammography Alias-Voice Solution RadNet® Tabs: Mammography Aliases	8 wks	Mon 7/15/13	Fri 9/6/13	8
4233	Data Collection Workbook - RadNet® Patient Tracking Tabs: Tracking Locations;Check Out; Questions; Tracking Rooms, Patient Logout; Procedure Times;Monitors; Monitor fields	8 wks	Mon 7/15/13	Fri 9/6/13	8
4234	**Task 5 Complete Partial System Build (BUILD)**	**14 wks**	**Mon 9/9/13**	**Fri 12/13/13**	
4235	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	14 wks	Mon 9/9/13	Fri 12/13/13	4178
4236	Work Package: RadNet - Bill-Only Items	14 wks	Mon 9/9/13	Fri 12/13/13	4178
4237	Work Package: RadNet - Bill-Only Procedure Relation	14 wks	Mon 9/9/13	Fri 12/13/13	4179
4238	Work Package: RadNet - Borrowers and Lenders	14 wks	Mon 9/9/13	Fri 12/13/13	4180
4239	Work Package: RadNet - Event Codes from Clinicals	14 wks	Mon 9/9/13	Fri 12/13/13	4181
4240	Work Package: RadNet - Film Usage by Procedure	14 wks	Mon 9/9/13	Fri 12/13/13	4182
4241	Work Package: RadNet - Folder Types	14 wks	Mon 9/9/13	Fri 12/13/13	4183
4242	Work Package: RadNet - Library Related	14 wks	Mon 9/9/13	Fri 12/13/13	4184
4243	Work Package: RadNet - Mammography Default Recall Intervals	14 wks	Mon 9/9/13	Fri 12/13/13	4185
4244	Work Package: RadNet - Bill-Only Categories	14 wks	Mon 9/9/13	Fri 12/13/13	4186
4245	Work Package: RadNet - Codeset Verification	14 wks	Mon 9/9/13	Fri 12/13/13	4187
4246	Work Package: RadNet - Doc Meds	14 wks	Mon 9/9/13	Fri 12/13/13	4188
4247	Work Package: RadNet - Protocols	14 wks	Mon 9/9/13	Fri 12/13/13	4189
4248	Work Package: RadNet - Subspecialties	14 wks	Mon 9/9/13	Fri 12/13/13	4190
4249	Work Package: RadNet - Allergy Alerts	14 wks	Mon 9/9/13	Fri 12/13/13	4191
4250	Work Package: RadNet - Mammography Notification Letter Association	14 wks	Mon 9/9/13	Fri 12/13/13	4192
4251	Work Package: RadNet - Multi-Segment Exams	14 wks	Mon 9/9/13	Fri 12/13/13	4193
4252	Work Package: RadNet - OEFs and Flexing	14 wks	Mon 9/9/13	Fri 12/13/13	4194
4253	Work Package: RadNet - Order Catalog Synonyms	14 wks	Mon 9/9/13	Fri 12/13/13	4195
4254	Work Package: RadNet - Physical Radiology Layout	14 wks	Mon 9/9/13	Fri 12/13/13	4196
4255	Work Package: RadNet - Procedure Classification	14 wks	Mon 9/9/13	Fri 12/13/13	4197
4256	Work Package: RadNet - Procedure Groups	14 wks	Mon 9/9/13	Fri 12/13/13	4198
4257	Work Package: RadNet - Radiologist Proxy	14 wks	Mon 9/9/13	Fri 12/13/13	4199
4258	Work Package: RadNet - Reason for Exam	14 wks	Mon 9/9/13	Fri 12/13/13	4200

ID	Task Name	Duration	Start	Finish	Predecessors
4259	Work Package: RadNet - Reason for Exam and Order Item Association	14 wks	Mon 9/9/13	Fri 12/13/13	4201
4260	Work Package: RadNet - Replace Groupings	14 wks	Mon 9/9/13	Fri 12/13/13	4202
4261	Work Package: RadNet - Service Areas	14 wks	Mon 9/9/13	Fri 12/13/13	4203
4262	Work Package: RadNet - Signature Lines	14 wks	Mon 9/9/13	Fri 12/13/13	4204
4263	Work Package: RadNet - Technical Comment Format Relation	14 wks	Mon 9/9/13	Fri 12/13/13	4205
4264	Work Package: RadNet - Technical Comments Fields	14 wks	Mon 9/9/13	Fri 12/13/13	4206
4265	Work Package: RadNet - Technical Comments Formats	14 wks	Mon 9/9/13	Fri 12/13/13	4207
4266	Work Package: RadNet - Word Processing Template Association	14 wks	Mon 9/9/13	Fri 12/13/13	4208
4267	Work Package: RadNet - Users and User Groups	14 wks	Mon 9/9/13	Fri 12/13/13	4209
4268	Work Package: RadNet - Word Processing Templates	14 wks	Mon 9/9/13	Fri 12/13/13	4210
4269	Work Package: RadNet - Work Routing	14 wks	Mon 9/9/13	Fri 12/13/13	4211
4270	Work Package: RadNet- Mpages	14 wks	Mon 9/9/13	Fri 12/13/13	4212
4271	Work Package: RadNet-Roles	14 wks	Mon 9/9/13	Fri 12/13/13	4213
4272	Work Package: RadNet-Interesting Cases	14 wks	Mon 9/9/13	Fri 12/13/13	4214
4273	Work Package: RadNet- Procedure Critiques	14 wks	Mon 9/9/13	Fri 12/13/13	4215
4274	Work Package: RadNet- Resident Setup	14 wks	Mon 9/9/13	Fri 12/13/13	4216
4275	Work Package: RadNet- Relevant Priors	14 wks	Mon 9/9/13	Fri 12/13/13	4217
4276	Work Package: RadNet- Radiologist Worklist Maintenance	14 wks	Mon 9/9/13	Fri 12/13/13	4218
4277	Work Package: RadNet-Service Resource Security	14 wks	Mon 9/9/13	Fri 12/13/13	4219
4278	Work Package: RadNet - Device Worklist	14 wks	Mon 9/9/13	Fri 12/13/13	4220
4279	Work Package: RadNet-Operations Reports	14 wks	Mon 9/9/13	Fri 12/13/13	4221
4280	Work Package: RadNet-Patient Packet	14 wks	Mon 9/9/13	Fri 12/13/13	4222
4281	Work Package: RadNet - Mammography Follow-up	14 wks	Mon 9/9/13	Fri 12/13/13	4223
4282	Work Package: RadNet - Mammography History	14 wks	Mon 9/9/13	Fri 12/13/13	4224
4283	Work Package: RadNet - Mammography Assessment/Recommendation	14 wks	Mon 9/9/13	Fri 12/13/13	4225
4284	Work Package: RadNet - Mammography Findings	14 wks	Mon 9/9/13	Fri 12/13/13	4226
4285	Work Package: RadNet - Mammography Pathology	14 wks	Mon 9/9/13	Fri 12/13/13	4227
4286	Work Package: RadNet - Mammography Notification Letters	14 wks	Mon 9/9/13	Fri 12/13/13	4228
4287	Work Package: RadNet - Mammography Structured Reporting	14 wks	Mon 9/9/13	Fri 12/13/13	4229
4288	Work Package: RadNet- Orderables for Bedrock	14 wks	Mon 9/9/13	Fri 12/13/13	4230
4289	Work Package: RadNet- Order Alias Review	14 wks	Mon 9/9/13	Fri 12/13/13	4231
4290	Work Package: RadNet- Mammography PowerScribe Aliases	14 wks	Mon 9/9/13	Fri 12/13/13	4232
4291	Work Package: RadNet- Patient Tracking	14 wks	Mon 9/9/13	Fri 12/13/13	4233

ID	Task Name	Duration	Start	Finish	Predecessors
4292	Subtask 5.2 Complete Initial Partial Build	0 days	Fri 12/13/13	Fri 12/13/13	4291
4293	**Task 6 Conduct System Validation**	**13 wks**	**Mon 12/16/13**	**Fri 3/14/14**	
4294	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
4295	Subtask 6.2 Conduct System Validation Session Follow-up	3 mons	Mon 12/23/13	Fri 3/14/14	4294
4296	**Task 7 Complete Build of Radiology and Conduct Unit and System Testing (TEST)**	**11 wks**	**Fri 12/13/13**	**Fri 2/28/14**	
4297	Subtask 7.1 Complete System Build	0 days	Fri 12/13/13	Fri 12/13/13	4292
4298	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	2.5 mons	Mon 12/16/13	Fri 2/21/14	4297
4299	**Quality Center Testing**	**3 wks**	**Mon 12/16/13**	**Fri 1/3/14**	
4300	QC Test: RadNet - Bill-Only Items	3 wks	Mon 12/16/13	Fri 1/3/14	4236
4301	QC Test: RadNet - Bill-Only Procedure Relation	3 wks	Mon 12/16/13	Fri 1/3/14	4237
4302	QC Test: RadNet - Borrowers and Lenders	3 wks	Mon 12/16/13	Fri 1/3/14	4238
4303	QC Test: RadNet - Event Codes from Clinicals	3 wks	Mon 12/16/13	Fri 1/3/14	4239
4304	QC Test: RadNet - Film Usage by Procedure	3 wks	Mon 12/16/13	Fri 1/3/14	4240
4305	QC Test: RadNet - Folder Types	3 wks	Mon 12/16/13	Fri 1/3/14	4241
4306	QC Test: RadNet - Library Related	3 wks	Mon 12/16/13	Fri 1/3/14	4242
4307	QC Test: RadNet - Mammography Default Recall Intervals	3 wks	Mon 12/16/13	Fri 1/3/14	4243
4308	QC Test: RadNet - Bill-Only Categories	3 wks	Mon 12/16/13	Fri 1/3/14	4244
4309	QC Test: RadNet - Codeset Verification	3 wks	Mon 12/16/13	Fri 1/3/14	4245
4310	QC Test: RadNet - Doc Meds	3 wks	Mon 12/16/13	Fri 1/3/14	4246
4311	QC Test: RadNet - Protocols	3 wks	Mon 12/16/13	Fri 1/3/14	4247
4312	QC Test: RadNet - Subspecialties	3 wks	Mon 12/16/13	Fri 1/3/14	4248
4313	QC Test: RadNet - Allergy Alerts	3 wks	Mon 12/16/13	Fri 1/3/14	4249
4314	QC Test: RadNet - Mammography Notification Letter Association	3 wks	Mon 12/16/13	Fri 1/3/14	4250
4315	QC Test: RadNet - Multi-Segment Exams	3 wks	Mon 12/16/13	Fri 1/3/14	4251
4316	QC Test: RadNet - OEFs and Flexing	3 wks	Mon 12/16/13	Fri 1/3/14	4252
4317	QC Test: RadNet - Order Catalog Synonyms	3 wks	Mon 12/16/13	Fri 1/3/14	4253
4318	QC Test: RadNet - Physical Radiology Layout	3 wks	Mon 12/16/13	Fri 1/3/14	4254
4319	QC Test: RadNet - Procedure Classification	3 wks	Mon 12/16/13	Fri 1/3/14	4255
4320	QC Test: RadNet - Procedure Groups	3 wks	Mon 12/16/13	Fri 1/3/14	4256
4321	QC Test: RadNet - Radiologist Proxy	3 wks	Mon 12/16/13	Fri 1/3/14	4257
4322	QC Test: RadNet - Reason for Exam	3 wks	Mon 12/16/13	Fri 1/3/14	4258

ID	Task Name	Duration	Start	Finish	Predecessors
4323	QC Test: RadNet - Reason for Exam and Order Item Association	3 wks	Mon 12/16/13	Fri 1/3/14	4259
4324	QC Test: RadNet - Replace Groupings	3 wks	Mon 12/16/13	Fri 1/3/14	4260
4325	QC Test: RadNet - Service Areas	3 wks	Mon 12/16/13	Fri 1/3/14	4261
4326	QC Test: RadNet - Signature Lines	3 wks	Mon 12/16/13	Fri 1/3/14	4262
4327	QC Test: RadNet - Technical Comment Format Relation	3 wks	Mon 12/16/13	Fri 1/3/14	4263
4328	QC Test: RadNet - Technical Comments Fields	3 wks	Mon 12/16/13	Fri 1/3/14	4264
4329	QC Test: RadNet - Technical Comments Formats	3 wks	Mon 12/16/13	Fri 1/3/14	4265
4330	QC Test: RadNet - Word Processing Template Association	3 wks	Mon 12/16/13	Fri 1/3/14	4266
4331	QC Test: RadNet - Users and User Groups	3 wks	Mon 12/16/13	Fri 1/3/14	4267
4332	QC Test: RadNet - Word Processing Templates	3 wks	Mon 12/16/13	Fri 1/3/14	4268
4333	QC Test: RadNet - Work Routing	3 wks	Mon 12/16/13	Fri 1/3/14	4269
4334	**Unit Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
4335	Localize Unit Test Scripts - RadNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
4336	Localize Unit Test Scripts - Mammography	5 wks	Mon 12/16/13	Fri 1/17/14	11
4337	Unit Test Scripts - RadNet	3 wks	Mon 1/20/14	Fri 2/7/14	4335
4338	Unit Test Scripts - Mammography	3 wks	Mon 1/20/14	Fri 2/7/14	4336
4339	Unit Test: RadNet - Bill-Only Items	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4236,4300
4340	Unit Test: RadNet - Bill-Only Procedure Relation	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4237,4301
4341	Unit Test: RadNet - Borrowers and Lenders	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4238,4302
4342	Unit Test: RadNet - Event Codes from Clinicals	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4239,4303
4343	Unit Test: RadNet - Film Usage by Procedure	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4240,4304
4344	Unit Test: RadNet - Folder Types	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4241,4305
4345	Unit Test: RadNet - Library Related	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4242,4306
4346	Unit Test: RadNet - Mammography Default Recall Intervals	3 wks	Mon 2/10/14	Fri 2/28/14	4338,4243,4307
4347	Unit Test: RadNet - Bill-Only Categories	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4244,4308
4348	Unit Test: RadNet - Codeset Verification	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4245,4309
4349	Unit Test: RadNet - Doc Meds	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4246,4310
4350	Unit Test: RadNet - Protocols	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4247,4311
4351	Unit Test: RadNet - Subspecialties	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4248,4312
4352	Unit Test: RadNet - Allergy Alerts	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4249,4313
4353	Unit Test: RadNet - Mammography Notification Letter Association	3 wks	Mon 2/10/14	Fri 2/28/14	4250,4338,4314
4354	Unit Test: RadNet - Multi-Segment Exams	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4251,4315
4355	Unit Test: RadNet - OEFs and Flexing	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4252,4316

ID	Task Name	Duration	Start	Finish	Predecessors
4356	Unit Test: RadNet - Order Catalog Synonyms	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4253,4317
4357	Unit Test: RadNet - Physical Radiology Layout	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4254,4318
4358	Unit Test: RadNet - Procedure Classification	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4255,4319
4359	Unit Test: RadNet - Procedure Groups	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4256,4320
4360	Unit Test: RadNet - Radiologist Proxy	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4257,4321
4361	Unit Test: RadNet - Reason for Exam	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4258,4322
4362	Unit Test: RadNet - Reason for Exam and Order Item Association	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4259,4323
4363	Unit Test: RadNet - Replace Groupings	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4260,4324
4364	Unit Test: RadNet - Service Areas	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4261,4325
4365	Unit Test: RadNet - Signature Lines	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4262,4326
4366	Unit Test: RadNet - Technical Comment Format Relation	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4263,4327
4367	Unit Test: RadNet - Technical Comments Fields	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4264,4328
4368	Unit Test: RadNet - Technical Comments Formats	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4265,4329
4369	Unit Test: RadNet - Word Processing Template Association	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4266,4330
4370	Unit Test: RadNet - Users and User Groups	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4267,4331
4371	Unit Test: RadNet - Word Processing Templates	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4268,4332
4372	Unit Test: RadNet - Work Routing	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4269,4333
4373	Unit Test: RadNet- Mpages	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4270
4374	Unit Test: RadNet-Roles	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4271
4375	Unit Test: RadNet-Interesting Cases	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4272
4376	Unit Test: RadNet- Procedure Critiques	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4273
4377	Unit Test: RadNet- Resident Setup	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4274
4378	Unit Test: RadNet- Relevant Priors	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4275
4379	Unit Test: RadNet- Radiologist Worklist Maintenance	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4276
4380	Unit Test: RadNet-Service Resource Security	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4277
4381	Unit Test: RadNet - Device Worklist	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4278
4382	Unit Test: RadNet-Operations Reports	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4279
4383	Unit Test: RadNet-Patient Packet	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4280
4384	Unit Test: RadNet - Mammography Follow-up	3 wks	Mon 2/10/14	Fri 2/28/14	4281,4338
4385	Unit Test: RadNet - Mammography History	3 wks	Mon 2/10/14	Fri 2/28/14	4282,4338
4386	Unit Test: RadNet - Mammography Assessment/Recommendation	3 wks	Mon 2/10/14	Fri 2/28/14	4283,4338
4387	Unit Test: RadNet - Mammography Findings	3 wks	Mon 2/10/14	Fri 2/28/14	4284,4338
4388	Unit Test: RadNet - Mammography Pathology	3 wks	Mon 2/10/14	Fri 2/28/14	4285,4338

ID	Task Name	Duration	Start	Finish	Predecessors
4389	Unit Test: RadNet - Mammography Notification Letters	3 wks	Mon 2/10/14	Fri 2/28/14	4286,4338
4390	Unit Test: RadNet - Mammography Structured Reporting	3 wks	Mon 2/10/14	Fri 2/28/14	4287,4338
4391	Unit Test: RadNet- Orderables for Bedrock	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4288
4392	Unit Test: RadNet- Order Alias Review	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4289
4393	Unit Test: RadNet- Mammography PowerScribe Aliases	3 wks	Mon 2/10/14	Fri 2/28/14	4290,4338
4394	Unit Test: RadNet- Patient Tracking	3 wks	Mon 2/10/14	Fri 2/28/14	4337,4291
4395	**System Testing**	**6 wks**	**Mon 12/16/13**	**Fri 1/24/14**	
4396	Localize System Test Tracking and Scripts - RadNet	1 wk	Mon 12/16/13	Fri 12/20/13	11
4397	First Draft System Test Scripts - RadNet	2 wks	Mon 12/23/13	Fri 1/3/14	4396
4398	Final System Test Scripts - RadNet	2 wks	Mon 12/23/13	Fri 1/3/14	4396
4399	Complete System Testing - RadNet	3 wks	Mon 1/6/14	Fri 1/24/14	4398
4400	Localize System Test Tracking and Scripts - RadNet Mammography	1 wk	Mon 12/16/13	Fri 12/20/13	11
4401	First Draft System Test Scripts - RadNet Mammography	2 wks	Mon 12/23/13	Fri 1/3/14	4400
4402	Final System Test Scripts - RadNet Mammography	2 wks	Mon 12/23/13	Fri 1/3/14	4400
4403	Complete System Testing - RadNet Mammography	3 wks	Mon 1/6/14	Fri 1/24/14	4402
4404	**Integration Testing**	**11 wks**	**Mon 12/16/13**	**Fri 2/28/14**	
4405	Integration Test Scripts - RadNet	5 wks	Mon 12/16/13	Fri 1/17/14	11
4406	Complete Integration Testing - RadNet	5 wks	Mon 1/27/14	Fri 2/28/14	4405,4403
4407	Integration Test Scripts - Mammography	5 wks	Mon 12/16/13	Fri 1/17/14	11
4408	Complete Integration Testing - Mammography	5 wks	Mon 1/20/14	Fri 2/21/14	4407
4409	Milestone: Conclude All Testing - RadNet	0 days	Fri 2/28/14	Fri 2/28/14	4399,4406,4339,4340,
4410	Milestone: Conclude All Testing - Mammography	0 days	Fri 2/28/14	Fri 2/28/14	4408,4399,4346,4353,
4411	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 2/28/14	Fri 2/28/14	4410FS-1 day
4412	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
4413	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
4414	Conversion Readiness Assessment - RadNet	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4415	Review & Update Conversion Cutover Plan (sent by IA) - RadNet	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
4416	Complete the Turnover Process documentation- RadNet	5 wks	Mon 6/30/14	Fri 8/1/14	18
4417	Conversion Readiness Assessment - Mammography	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4418	Review & Update Conversion Cutover Plan (sent by IA) - Mammography	3 wks	Mon 4/14/14	Fri 5/2/14	14SS
4419	Complete the Turnover Process documentation- Mammography	5 wks	Mon 6/30/14	Fri 8/1/14	18
4420	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	
4421	Complete Post Conversion Assessment Workbook for RadNet	2 wks	Mon 9/8/14	Fri 9/19/14	24SS

ID	Task Name	Duration	Start	Finish	Predecessors
4422	Complete Post Conversion Assessment Workbook for Mammography	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4423	**SOW #15 - Rehabilitation**	**69 wks**	**Mon 12/24/12**	**Fri 4/18/14**	
4424	**Task 1 Conduct SOW Kick-off/ Mobilization**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
4425	Subtask 1.1 Develop detailed Sub-Project Work Plan - Rehabilitation	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
4426	Subtask 1.2 Conduct Initiation session for Rehabilitation Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
4427	Subtask 1.3 Conduct Comprehension Exercises	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
4428	**Task 2 Conduct Current State Assessment**	**6 wks**	**Mon 5/20/13**	**Fri 6/28/13**	
4429	Subtask 2.1 Identify and Document Domains, Venues, and Locations of Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
4430	Subtask 2.2 Conduct Workflow Assessment	1 wk	Mon 5/20/13	Fri 5/24/13	7
4431	Subtask 2.3 Review current DHS workflows and processes to identify risks and opportunities	1 wk	Mon 6/24/13	Fri 6/28/13	4430FS+4 wks
4432	**Task 3 Conduct System Review**	**17 wks**	**Mon 7/8/13**	**Fri 11/1/13**	
4433	Subtask 3.1 Conduct System Review Session	1 wk	Mon 7/8/13	Fri 7/12/13	8SS
4434	Subtask 3.2 Perform System Review Data Collection (System Review follow-up)	4 mons	Mon 7/15/13	Fri 11/1/13	4433
4435	**Task 4 Conduct Design Review**	**8 wks**	**Mon 9/30/13**	**Fri 11/22/13**	
4436	Subtask 4.1 Conduct Design Review Session	1 wk	Mon 9/30/13	Fri 10/4/13	9SS
4437	Subtask 4.2 Conduct Design Review Session follow-up	1 wk	Mon 10/21/13	Fri 10/25/13	4436FS+2 wks
4438	Subtask 4.3 Conduct Workflow Localization	1 wk	Mon 10/21/13	Fri 10/25/13	4436FS+2 wks
4439	Subtask 4.4 Conduct Rehabilitation Workflow Workshop	1 wk	Mon 10/21/13	Fri 10/25/13	4436FS+2 wks
4440	Subtask 4.5 Develop Final Detailed Design Document	1 wk	Mon 11/18/13	Fri 11/22/13	4439FS+3 wks
4441	**Task 5 Complete Partial System Build**	**20 wks**	**Mon 9/9/13**	**Fri 1/24/14**	
4442	Subtask 5.1 Identify content and functional coverage of initial Partial System Build	0 days	Mon 9/9/13	Mon 9/9/13	
4443	Subtask 5.2 Complete Initial Partial Build	5 mons	Mon 9/9/13	Fri 1/24/14	4442
4444	**Task 6 Conduct System Validation**	**17 wks**	**Mon 12/16/13**	**Fri 4/11/14**	
4445	Subtask 6.1 Conduct System Validation Session	1 wk	Mon 12/16/13	Fri 12/20/13	11
4446	Subtask 6.2 Conduct System Validation Session Follow-up	4 mons	Mon 12/23/13	Fri 4/11/14	4445
4447	**Task 7 Complete Build of Rehabilitation and Conduct Unit and System Testing**	**12 wks**	**Fri 1/24/14**	**Fri 4/18/14**	
4448	Subtask 7.1 Complete System Build	0 days	Fri 1/24/14	Fri 1/24/14	4443
4449	Subtask 7.2 Resolve Defects and Implement County Approved Change Requests	3 mons	Mon 1/27/14	Fri 4/18/14	4448

ID	Task Name	Duration	Start	Finish	Predecessors
4450	Subtask 7.3 Complete Unit and System Testing	0 days	Fri 4/18/14	Fri 4/18/14	4449
4451	**Lighthouse Catalog**	**73 wks**	**Mon 4/29/13**	**Fri 9/19/14**	
4452	**DESIGN**	**11 wks**	**Mon 4/29/13**	**Fri 7/12/13**	
4453	**Establish Context for Design**	**3 wks**	**Mon 4/29/13**	**Fri 5/17/13**	
4454	**Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHActivityTolerance**	**1 wk**	**Mon 4/29/13**	**Fri 5/3/13**	**5**
4455	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHAnemia	1 wk	Mon 4/29/13	Fri 5/3/13	5
4456	**Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHAnticoag**	**1 wk**	**Mon 4/29/13**	**Fri 5/3/13**	**5**
4457	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHCathRelinfection	1 wk	Mon 4/29/13	Fri 5/3/13	5
4458	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHCAP	1 wk	Mon 4/29/13	Fri 5/3/13	5
4459	**Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHCoreMeas**	**1 wk**	**Mon 4/29/13**	**Fri 5/3/13**	**5**
4460	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHDeliriumMgmt	1 wk	Mon 4/29/13	Fri 5/3/13	5
4461	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHDepressionMgmt	1 wk	Mon 4/29/13	Fri 5/3/13	5
4462	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHDysphagia	1 wk	Mon 4/29/13	Fri 5/3/13	5
4463	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHFallPed	1 wk	Mon 4/29/13	Fri 5/3/13	5
4464	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHFallRisk	1 wk	Mon 4/29/13	Fri 5/3/13	5
4465	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHFluidVolExcess	1 wk	Mon 4/29/13	Fri 5/3/13	5
4466	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHGlycemic	1 wk	Mon 4/29/13	Fri 5/3/13	5
4467	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHHeartFailure	1 wk	Mon 4/29/13	Fri 5/3/13	5
4468	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHInfectionControl	1 wk	Mon 4/29/13	Fri 5/3/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
4469	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHLipidMgmt	1 wk	Mon 4/29/13	Fri 5/3/13	5
4470	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHMedicationAdherence	1 wk	Mon 4/29/13	Fri 5/3/13	5
4471	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHModSedAdult	1 wk	Mon 4/29/13	Fri 5/3/13	5
4472	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHPainMgmt	1 wk	Mon 4/29/13	Fri 5/3/13	5
4473	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHPainMgmtPed	1 wk	Mon 4/29/13	Fri 5/3/13	5
4474	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHPressureUlcer	1 wk	Mon 5/6/13	Fri 5/10/13	5
4475	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHPedSkin	1 wk	Mon 5/6/13	Fri 5/10/13	5
4476	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHRapidRespTm	1 wk	Mon 5/6/13	Fri 5/10/13	5
4477	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHReadmission	1 wk	Mon 5/6/13	Fri 5/10/13	5
4478	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHRestraints	1 wk	Mon 5/6/13	Fri 5/10/13	5
4479	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHSepsis	1 wk	Mon 5/6/13	Fri 5/10/13	5
4480	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHStroke	1 wk	Mon 5/6/13	Fri 5/10/13	5
4481	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHSurgQual	1 wk	Mon 5/6/13	Fri 5/10/13	5
4482	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHUrinaryIncontAd	1 wk	Mon 5/6/13	Fri 5/10/13	5
4483	Review Lighthouse Solution Overview (PPT) and Project Coordination w/ Cerner Architect - LHVTEPrevention	1 wk	Mon 5/6/13	Fri 5/10/13	5
4484	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHActivityTolerance	1 wk	Mon 5/6/13	Fri 5/10/13	5
4485	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHAnemia	1 wk	Mon 5/6/13	Fri 5/10/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
4486	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHAnticoag	1 wk	Mon 5/6/13	Fri 5/10/13	5
4487	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHCathRelinfection	1 wk	Mon 5/6/13	Fri 5/10/13	5
4488	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHCAP	1 wk	Mon 5/6/13	Fri 5/10/13	5
4489	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHCoreMeas	1 wk	Mon 5/6/13	Fri 5/10/13	5
4490	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHDeliriumMgtm	1 wk	Mon 5/6/13	Fri 5/10/13	5
4491	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHDepressionMgtm	1 wk	Mon 5/6/13	Fri 5/10/13	5
4492	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHDysphagia	1 wk	Mon 5/6/13	Fri 5/10/13	5
4493	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHFallPed	1 wk	Mon 5/6/13	Fri 5/10/13	5
4494	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHFallRisk	1 wk	Mon 5/13/13	Fri 5/17/13	5
4495	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHFluidVolExcess	1 wk	Mon 5/13/13	Fri 5/17/13	5
4496	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHGlycemic	1 wk	Mon 5/13/13	Fri 5/17/13	5
4497	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHHeartFailure	1 wk	Mon 5/13/13	Fri 5/17/13	5
4498	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHInfectionControl	1 wk	Mon 5/13/13	Fri 5/17/13	5
4499	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHLipidMgmt	1 wk	Mon 5/13/13	Fri 5/17/13	5
4500	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHMedicationAdherence	1 wk	Mon 5/13/13	Fri 5/17/13	5
4501	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHModSedAdult	1 wk	Mon 5/13/13	Fri 5/17/13	5
4502	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHPainMgmt	1 wk	Mon 5/13/13	Fri 5/17/13	5

ID	Task Name	Duration	Start	Finish	Predecessors
4503	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHPainMgmtPed	1 wk	Mon 5/13/13	Fri 5/17/13	5
4504	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHPressureUlcer	1 wk	Mon 5/13/13	Fri 5/17/13	5
4505	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHPedSkin	1 wk	Mon 5/13/13	Fri 5/17/13	5
4506	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHRapidRespTm	1 wk	Mon 5/13/13	Fri 5/17/13	5
4507	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHReadmission	1 wk	Mon 5/13/13	Fri 5/17/13	5
4508	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHRestraints	1 wk	Mon 5/13/13	Fri 5/17/13	5
4509	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHSepsis	1 wk	Mon 5/13/13	Fri 5/17/13	5
4510	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHStroke	1 wk	Mon 5/13/13	Fri 5/17/13	5
4511	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHSurgQual	1 wk	Mon 5/13/13	Fri 5/17/13	5
4512	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHUrinaryIncontAd	1 wk	Mon 5/13/13	Fri 5/17/13	5
4513	Review Lighthouse Solution Overview w/ Client Lighthouse Architect (ppt) - LHVTEPrevention	1 wk	Mon 5/13/13	Fri 5/17/13	5
4514	**Data Collection**	**8 wks**	**Mon 5/20/13**	**Fri 7/12/13**	
4515	Data Collection Workbook - LHActivityTolerance	8 wks	Mon 5/20/13	Fri 7/12/13	7
4516	Data Collection Workbook - LHAnemia	8 wks	Mon 5/20/13	Fri 7/12/13	7
4517	Data Collection Workbook - LHAnticoag	8 wks	Mon 5/20/13	Fri 7/12/13	7
4518	Data Collection Workbook - LHCathRelinfection	8 wks	Mon 5/20/13	Fri 7/12/13	7
4519	Data Collection Workbook - LHCAP	8 wks	Mon 5/20/13	Fri 7/12/13	7
4520	Data Collection Workbook - LHCoreMeas	8 wks	Mon 5/20/13	Fri 7/12/13	7
4521	Data Collection Workbook - LHDeliriumMgmt	8 wks	Mon 5/20/13	Fri 7/12/13	7
4522	Data Collection Workbook - LHDepressionMgmt	8 wks	Mon 5/20/13	Fri 7/12/13	7
4523	Data Collection Workbook - LHDysphagia	8 wks	Mon 5/20/13	Fri 7/12/13	7
4524	Data Collection Workbook - LHFallPed	8 wks	Mon 5/20/13	Fri 7/12/13	7
4525	Data Collection Workbook - LHFallRisk	8 wks	Mon 5/20/13	Fri 7/12/13	7

ID	Task Name	Duration	Start	Finish	Predecessors
4526	Data Collection Workbook - LHFluidVolExcess	8 wks	Mon 5/20/13	Fri 7/12/13	7
4527	Data Collection Workbook - LHGlycemic	8 wks	Mon 5/20/13	Fri 7/12/13	7
4528	Data Collection Workbook - LHHeartFailure	8 wks	Mon 5/20/13	Fri 7/12/13	7
4529	Data Collection Workbook - LHInfectionControl	8 wks	Mon 5/20/13	Fri 7/12/13	7
4530	Data Collection Workbook - LHLipidMgmt	8 wks	Mon 5/20/13	Fri 7/12/13	7
4531	Data Collection Workbook - LHMedicationAdherence	8 wks	Mon 5/20/13	Fri 7/12/13	7
4532	Data Collection Workbook - LHModSedAdult	8 wks	Mon 5/20/13	Fri 7/12/13	7
4533	Data Collection Workbook - LHPainMgmt	8 wks	Mon 5/20/13	Fri 7/12/13	7
4534	Data Collection Workbook - LHPainMgmtPed	8 wks	Mon 5/20/13	Fri 7/12/13	7
4535	Data Collection Workbook - LHPressureUlcer	8 wks	Mon 5/20/13	Fri 7/12/13	7
4536	Data Collection Workbook - LHPedSkin	8 wks	Mon 5/20/13	Fri 7/12/13	7
4537	Data Collection Workbook - LHRapidRespTm	8 wks	Mon 5/20/13	Fri 7/12/13	7
4538	Data Collection Workbook - LHReadmission	8 wks	Mon 5/20/13	Fri 7/12/13	7
4539	Data Collection Workbook - LHRestraints	8 wks	Mon 5/20/13	Fri 7/12/13	7
4540	Data Collection Workbook - LHSepsis	8 wks	Mon 5/20/13	Fri 7/12/13	7
4541	Data Collection Workbook - LHStroke	8 wks	Mon 5/20/13	Fri 7/12/13	7
4542	Data Collection Workbook - LHSurgQual	8 wks	Mon 5/20/13	Fri 7/12/13	7
4543	Data Collection Workbook - LHUrinaryIncontAd	8 wks	Mon 5/20/13	Fri 7/12/13	7
4544	Data Collection Workbook - LHVTEPrevention	8 wks	Mon 5/20/13	Fri 7/12/13	7
4545	**BUILD**	**14 wks**	**Mon 7/15/13**	**Fri 10/18/13**	
4546	Work Package:LHActivityTolerance	14 wks	Mon 7/15/13	Fri 10/18/13	4515
4547	Work Package:LHAnemia	14 wks	Mon 7/15/13	Fri 10/18/13	4516
4548	Work Package:LHAnticoag	14 wks	Mon 7/15/13	Fri 10/18/13	4517
4549	Work Package:LHCathRelinfection	14 wks	Mon 7/15/13	Fri 10/18/13	4518
4550	Work Package:LHCAP	14 wks	Mon 7/15/13	Fri 10/18/13	4519
4551	Work Package:LHCoreMeas	14 wks	Mon 7/15/13	Fri 10/18/13	4520
4552	Work Package:LHDeliriumMgmt	14 wks	Mon 7/15/13	Fri 10/18/13	4521
4553	Work Package:LHDepressionMgmt	14 wks	Mon 7/15/13	Fri 10/18/13	4522
4554	Work Package:LHDysphagia	14 wks	Mon 7/15/13	Fri 10/18/13	4523
4555	Work Package:LHFallPed	14 wks	Mon 7/15/13	Fri 10/18/13	4524
4556	Work Package:LHFallRisk	14 wks	Mon 7/15/13	Fri 10/18/13	4525
4557	Work Package:LHFluidVolExcess	14 wks	Mon 7/15/13	Fri 10/18/13	4526
4558	Work Package:LHGlycemic	14 wks	Mon 7/15/13	Fri 10/18/13	4527

ID	Task Name	Duration	Start	Finish	Predecessors
4559	Work Package:LHHeartFailure	14 wks	Mon 7/15/13	Fri 10/18/13	4528
4560	Work Package:LHInfectionControl	14 wks	Mon 7/15/13	Fri 10/18/13	4529
4561	Work Package:LHLipidMgmt	14 wks	Mon 7/15/13	Fri 10/18/13	4530
4562	Work Package:LHMedicationAdherence	14 wks	Mon 7/15/13	Fri 10/18/13	4531
4563	Work Package:LHModSedAdult	14 wks	Mon 7/15/13	Fri 10/18/13	4532
4564	Work Package:LHPainMgmt	14 wks	Mon 7/15/13	Fri 10/18/13	4533
4565	Work Package:LHPainMgmtPed	14 wks	Mon 7/15/13	Fri 10/18/13	4534
4566	Work Package:LHPressureUlcer	14 wks	Mon 7/15/13	Fri 10/18/13	4535
4567	Work Package:LHPedSkin	14 wks	Mon 7/15/13	Fri 10/18/13	4536
4568	Work Package:LHRapidRespTm	14 wks	Mon 7/15/13	Fri 10/18/13	4537
4569	Work Package:LHReadmission	14 wks	Mon 7/15/13	Fri 10/18/13	4538
4570	Work Package:LHRestraints	14 wks	Mon 7/15/13	Fri 10/18/13	4539
4571	Work Package:LHSepsis	14 wks	Mon 7/15/13	Fri 10/18/13	4540
4572	Work Package:LHStroke	14 wks	Mon 7/15/13	Fri 10/18/13	4541
4573	Work Package:LHSurgQual	14 wks	Mon 7/15/13	Fri 10/18/13	4542
4574	Work Package:LHUrinaryIncontAd	14 wks	Mon 7/15/13	Fri 10/18/13	4543
4575	Work Package:LHVTEPrevention	14 wks	Mon 7/15/13	Fri 10/18/13	4544
4576	**TEST**	**17 wks**	**Mon 12/16/13**	**Fri 4/11/14**	
4577	**Unit Testing**	**17 wks**	**Mon 12/16/13**	**Fri 4/11/14**	
4578	Unit Test Scripts - LHActivityTolerance	3 wks	Mon 12/16/13	Fri 1/3/14	11
4579	Unit Test Scripts - LHAnemia	14 wks	Mon 12/16/13	Fri 3/21/14	11
4580	Unit Test Scripts - LHAnticoag	14 wks	Mon 12/16/13	Fri 3/21/14	11
4581	Unit Test Scripts - LHCathRelinfection	14 wks	Mon 12/16/13	Fri 3/21/14	11
4582	Unit Test Scripts - LHCAP	14 wks	Mon 12/16/13	Fri 3/21/14	11
4583	Unit Test Scripts - LHCoreMeas	14 wks	Mon 12/16/13	Fri 3/21/14	11
4584	Unit Test Scripts - LHDeliriumMgmt	14 wks	Mon 12/16/13	Fri 3/21/14	11
4585	Unit Test Scripts - LHDepressionMgmt	14 wks	Mon 12/16/13	Fri 3/21/14	11
4586	Unit Test Scripts - LHDysphagia	14 wks	Mon 12/16/13	Fri 3/21/14	11
4587	Unit Test Scripts - LHFallPed	14 wks	Mon 12/16/13	Fri 3/21/14	11
4588	Unit Test Scripts - LHFallRisk	14 wks	Mon 12/16/13	Fri 3/21/14	11
4589	Unit Test Scripts - LHFluidVolExcess	14 wks	Mon 12/16/13	Fri 3/21/14	11
4590	Unit Test Scripts - LHGlycemic	14 wks	Mon 12/16/13	Fri 3/21/14	11
4591	Unit Test Scripts - LHHeartFailure	14 wks	Mon 12/16/13	Fri 3/21/14	11

ID	Task Name	Duration	Start	Finish	Predecessors
4592	Unit Test Scripts - LHInfectionControl	14 wks	Mon 12/16/13	Fri 3/21/14	11
4593	Unit Test Scripts - LHLipidMgmt	14 wks	Mon 12/16/13	Fri 3/21/14	11
4594	Unit Test Scripts - LHMedicationAdherence	14 wks	Mon 12/16/13	Fri 3/21/14	11
4595	Unit Test Scripts - LHModSedAdult	14 wks	Mon 12/16/13	Fri 3/21/14	11
4596	Unit Test Scripts - LHPainMgmt	14 wks	Mon 12/16/13	Fri 3/21/14	11
4597	Unit Test Scripts - LHPainMgmtPed	14 wks	Mon 12/16/13	Fri 3/21/14	11
4598	Unit Test Scripts - LHPressureUlcer	14 wks	Mon 12/16/13	Fri 3/21/14	11
4599	Unit Test Scripts - LHPedSkin	14 wks	Mon 12/16/13	Fri 3/21/14	11
4600	Unit Test Scripts - LHRapidRespTm	14 wks	Mon 12/16/13	Fri 3/21/14	11
4601	Unit Test Scripts - LHReadmission	14 wks	Mon 12/16/13	Fri 3/21/14	11
4602	Unit Test Scripts - LHRestraints	14 wks	Mon 12/16/13	Fri 3/21/14	11
4603	Unit Test Scripts - LHSepsis	14 wks	Mon 12/16/13	Fri 3/21/14	11
4604	Unit Test Scripts - LHStroke	14 wks	Mon 12/16/13	Fri 3/21/14	11
4605	Unit Test Scripts - LHSurgQual	14 wks	Mon 12/16/13	Fri 3/21/14	11
4606	Unit Test Scripts - LHUrinaryIncontAd	14 wks	Mon 12/16/13	Fri 3/21/14	11
4607	Unit Test Scripts - LHVTEPrevention	14 wks	Mon 12/16/13	Fri 3/21/14	11
4608	Unit Test: LHActivityTolerance	3 wks	Mon 1/6/14	Fri 1/24/14	4578
4609	Unit Test: LHAnemia	3 wks	Mon 3/24/14	Fri 4/11/14	4579
4610	Unit Test: LHAnticoag	3 wks	Mon 3/24/14	Fri 4/11/14	4580
4611	Unit Test: LHCathRelinfection	3 wks	Mon 3/24/14	Fri 4/11/14	4581
4612	Unit Test: LHCAP	3 wks	Mon 3/24/14	Fri 4/11/14	4582
4613	Unit Test: LHCoreMeas	3 wks	Mon 3/24/14	Fri 4/11/14	4583
4614	Unit Test: LHDeliriumMgmt	3 wks	Mon 3/24/14	Fri 4/11/14	4584
4615	Unit Test: LHDepressionMgmt	3 wks	Mon 3/24/14	Fri 4/11/14	4585
4616	Unit Test: LHDysphagia	3 wks	Mon 3/24/14	Fri 4/11/14	4586
4617	Unit Test: LHFallPed	3 wks	Mon 3/24/14	Fri 4/11/14	4587
4618	Unit Test: LHFallRisk	3 wks	Mon 3/24/14	Fri 4/11/14	4588
4619	Unit Test: LHFluidVolExcess	3 wks	Mon 3/24/14	Fri 4/11/14	4589
4620	Unit Test: LHGlycemic	3 wks	Mon 3/24/14	Fri 4/11/14	4590
4621	Unit Test: LHHeartFailure	3 wks	Mon 3/24/14	Fri 4/11/14	4591
4622	Unit Test: LHInfectionControl	3 wks	Mon 3/24/14	Fri 4/11/14	4592
4623	Unit Test: LHLipidMgmt	3 wks	Mon 3/24/14	Fri 4/11/14	4593
4624	Unit Test: LHMedicationAdherence	3 wks	Mon 3/24/14	Fri 4/11/14	4594

ID	Task Name	Duration	Start	Finish	Predecessors
4625	Unit Test: LHModSedAdult	3 wks	Mon 3/24/14	Fri 4/11/14	4595
4626	Unit Test: LHPainMgmt	3 wks	Mon 3/24/14	Fri 4/11/14	4596
4627	Unit Test: LHPainMgmtPed	3 wks	Mon 3/24/14	Fri 4/11/14	4597
4628	Unit Test: LHPressureUlcer	3 wks	Mon 3/24/14	Fri 4/11/14	4598
4629	Unit Test: LHPedSkin	3 wks	Mon 3/24/14	Fri 4/11/14	4599
4630	Unit Test: LHRapidRespTm	3 wks	Mon 3/24/14	Fri 4/11/14	4600
4631	Unit Test: LHReadmission	3 wks	Mon 3/24/14	Fri 4/11/14	4601
4632	Unit Test: LHRestraints	3 wks	Mon 3/24/14	Fri 4/11/14	4602
4633	Unit Test: LHSepsis	3 wks	Mon 3/24/14	Fri 4/11/14	4603
4634	Unit Test: LHStroke	3 wks	Mon 3/24/14	Fri 4/11/14	4604
4635	Unit Test: LHSurgQual	3 wks	Mon 3/24/14	Fri 4/11/14	4605
4636	Unit Test: LHUrinaryIncontAd	3 wks	Mon 3/24/14	Fri 4/11/14	4606
4637	Unit Test: LHVTEPrevention	3 wks	Mon 3/24/14	Fri 4/11/14	4607
4638	**System Testing**	**5 wks**	**Mon 12/16/13**	**Fri 1/17/14**	
4639	Final System Test Scripts - LHActivityTolerance	2 wks	Mon 12/16/13	Fri 12/27/13	11
4640	Final System Test Scripts - LHAnemia	2 wks	Mon 12/16/13	Fri 12/27/13	11
4641	Final System Test Scripts - LHAnticoag	2 wks	Mon 12/16/13	Fri 12/27/13	11
4642	Final System Test Scripts - LHCathRelinfection	2 wks	Mon 12/16/13	Fri 12/27/13	11
4643	Final System Test Scripts - LHCAP	2 wks	Mon 12/16/13	Fri 12/27/13	11
4644	Final System Test Scripts - LHCoreMeas	2 wks	Mon 12/16/13	Fri 12/27/13	11
4645	Final System Test Scripts - LHDeliriumMgmt	2 wks	Mon 12/16/13	Fri 12/27/13	11
4646	Final System Test Scripts - LHDepressionMgmt	2 wks	Mon 12/16/13	Fri 12/27/13	11
4647	Final System Test Scripts - LHDysphagia	2 wks	Mon 12/16/13	Fri 12/27/13	11
4648	Final System Test Scripts - LHFallPed	2 wks	Mon 12/16/13	Fri 12/27/13	11
4649	Final System Test Scripts - LHFallRisk	2 wks	Mon 12/16/13	Fri 12/27/13	11
4650	Final System Test Scripts - LHFluidVolExcess	2 wks	Mon 12/16/13	Fri 12/27/13	11
4651	Final System Test Scripts - LHGlycemic	2 wks	Mon 12/16/13	Fri 12/27/13	11
4652	Final System Test Scripts - LHHeartFailure	2 wks	Mon 12/16/13	Fri 12/27/13	11
4653	Final System Test Scripts - LHInfectionControl	2 wks	Mon 12/16/13	Fri 12/27/13	11
4654	Final System Test Scripts - LHLipidMgmt	2 wks	Mon 12/16/13	Fri 12/27/13	11
4655	Final System Test Scripts - LHMedicationAdherence	2 wks	Mon 12/16/13	Fri 12/27/13	11
4656	Final System Test Scripts - LHModSedAdult	2 wks	Mon 12/16/13	Fri 12/27/13	11
4657	Final System Test Scripts - LHPainMgmt	2 wks	Mon 12/16/13	Fri 12/27/13	11

ID	Task Name	Duration	Start	Finish	Predecessors
4658	Final System Test Scripts - LHPainMgmtPed	2 wks	Mon 12/16/13	Fri 12/27/13	11
4659	Final System Test Scripts - LHPressureUlcer	2 wks	Mon 12/16/13	Fri 12/27/13	11
4660	Final System Test Scripts - LHPedSkin	2 wks	Mon 12/16/13	Fri 12/27/13	11
4661	Final System Test Scripts - LHRapidRespTm	2 wks	Mon 12/16/13	Fri 12/27/13	11
4662	Final System Test Scripts - LHReadmission	2 wks	Mon 12/16/13	Fri 12/27/13	11
4663	Final System Test Scripts - LHRestraints	2 wks	Mon 12/16/13	Fri 12/27/13	11
4664	Final System Test Scripts - LHSepsis	2 wks	Mon 12/16/13	Fri 12/27/13	11
4665	Final System Test Scripts - LHStroke	2 wks	Mon 12/16/13	Fri 12/27/13	11
4666	Final System Test Scripts - LHSurgQual	2 wks	Mon 12/16/13	Fri 12/27/13	11
4667	Final System Test Scripts - LHUrinaryIncontAd	2 wks	Mon 12/16/13	Fri 12/27/13	11
4668	Final System Test Scripts - LHVTEPrevention	2 wks	Mon 12/16/13	Fri 12/27/13	11
4669	Complete System Testing - LHActivityTolerance	3 wks	Mon 12/30/13	Fri 1/17/14	4639
4670	Complete System Testing - LHAnemia	3 wks	Mon 12/30/13	Fri 1/17/14	4640
4671	Complete System Testing - LHAnticoag	3 wks	Mon 12/30/13	Fri 1/17/14	4641
4672	Complete System Testing - LHCathRelinfection	3 wks	Mon 12/30/13	Fri 1/17/14	4642
4673	Complete System Testing - LHCAP	3 wks	Mon 12/30/13	Fri 1/17/14	4643
4674	Complete System Testing - LHCoreMeas	3 wks	Mon 12/30/13	Fri 1/17/14	4644
4675	Complete System Testing - LHDeliriumMgmt	3 wks	Mon 12/30/13	Fri 1/17/14	4645
4676	Complete System Testing - LHDepressionMgmt	3 wks	Mon 12/30/13	Fri 1/17/14	4646
4677	Complete System Testing - LHDysphagia	3 wks	Mon 12/30/13	Fri 1/17/14	4647
4678	Complete System Testing - LHFallPed	3 wks	Mon 12/30/13	Fri 1/17/14	4648
4679	Complete System Testing - LHFallRisk	3 wks	Mon 12/30/13	Fri 1/17/14	4649
4680	Complete System Testing - LHFluidVolExcess	3 wks	Mon 12/30/13	Fri 1/17/14	4650
4681	Complete System Testing - LHGlycemic	3 wks	Mon 12/30/13	Fri 1/17/14	4651
4682	Complete System Testing - LHHeartFailure	3 wks	Mon 12/30/13	Fri 1/17/14	4652
4683	Complete System Testing - LHInfectionControl	3 wks	Mon 12/30/13	Fri 1/17/14	4653
4684	Complete System Testing - LHLipidMgmt	3 wks	Mon 12/30/13	Fri 1/17/14	4654
4685	Complete System Testing - LHMedicationAdherence	3 wks	Mon 12/30/13	Fri 1/17/14	4655
4686	Complete System Testing - LHModSedAdult	3 wks	Mon 12/30/13	Fri 1/17/14	4656
4687	Complete System Testing - LHPainMgmt	3 wks	Mon 12/30/13	Fri 1/17/14	4657
4688	Complete System Testing - LHPainMgmtPed	3 wks	Mon 12/30/13	Fri 1/17/14	4658
4689	Complete System Testing - LHPressureUlcer	3 wks	Mon 12/30/13	Fri 1/17/14	4659
4690	Complete System Testing - LHPedSkin	3 wks	Mon 12/30/13	Fri 1/17/14	4660

ID	Task Name	Duration	Start	Finish	Predecessors
4691	Complete System Testing - LHRapidRespTm	3 wks	Mon 12/30/13	Fri 1/17/14	4661
4692	Complete System Testing - LHReadmission	3 wks	Mon 12/30/13	Fri 1/17/14	4662
4693	Complete System Testing - LHRestraints	3 wks	Mon 12/30/13	Fri 1/17/14	4663
4694	Complete System Testing - LHSepsis	3 wks	Mon 12/30/13	Fri 1/17/14	4664
4695	Complete System Testing - LHStroke	3 wks	Mon 12/30/13	Fri 1/17/14	4665
4696	Complete System Testing - LHSurgQual	3 wks	Mon 12/30/13	Fri 1/17/14	4666
4697	Complete System Testing - LHUrinaryIncontAd	3 wks	Mon 12/30/13	Fri 1/17/14	4667
4698	Complete System Testing - LHVTEPrevention	3 wks	Mon 12/30/13	Fri 1/17/14	4668
4699	**Integration Testing**	**9 wks**	**Mon 12/16/13**	**Fri 2/14/14**	
4700	Integration Test Scripts - LHActivityTolerance	5 wks	Mon 12/16/13	Fri 1/17/14	11
4701	Integration Test Scripts - LHAnemia	5 wks	Mon 12/16/13	Fri 1/17/14	11
4702	Integration Test Scripts - LHAnticoag	5 wks	Mon 12/16/13	Fri 1/17/14	11
4703	Integration Test Scripts - LHCathRelinfection	5 wks	Mon 12/16/13	Fri 1/17/14	11
4704	Integration Test Scripts - LHCAP	5 wks	Mon 12/16/13	Fri 1/17/14	11
4705	Integration Test Scripts - LHCoreMeas	5 wks	Mon 12/16/13	Fri 1/17/14	11
4706	Integration Test Scripts - LHDeliriumMgmt	5 wks	Mon 12/16/13	Fri 1/17/14	11
4707	Integration Test Scripts - LHDepressionMgmt	5 wks	Mon 12/16/13	Fri 1/17/14	11
4708	Integration Test Scripts - LHDysphagia	5 wks	Mon 12/16/13	Fri 1/17/14	11
4709	Integration Test Scripts - LHFallPed	5 wks	Mon 12/16/13	Fri 1/17/14	11
4710	Integration Test Scripts - LHFallRisk	5 wks	Mon 12/16/13	Fri 1/17/14	11
4711	Integration Test Scripts - LHFluidVolExcess	5 wks	Mon 12/16/13	Fri 1/17/14	11
4712	Integration Test Scripts - LHGlycemic	5 wks	Mon 12/16/13	Fri 1/17/14	11
4713	Integration Test Scripts - LHHeartFailure	5 wks	Mon 12/16/13	Fri 1/17/14	11
4714	Integration Test Scripts - LHInfectionControl	5 wks	Mon 12/16/13	Fri 1/17/14	11
4715	Integration Test Scripts - LHLipidMgmt	5 wks	Mon 12/16/13	Fri 1/17/14	11
4716	Integration Test Scripts - LHMedicationAdherence	5 wks	Mon 12/16/13	Fri 1/17/14	11
4717	Integration Test Scripts - LHModSedAdult	5 wks	Mon 12/16/13	Fri 1/17/14	11
4718	Integration Test Scripts - LHPainMgmt	5 wks	Mon 12/16/13	Fri 1/17/14	11
4719	Integration Test Scripts - LHPainMgmtPed	5 wks	Mon 12/16/13	Fri 1/17/14	11
4720	Integration Test Scripts - LHPressureUlcer	5 wks	Mon 12/16/13	Fri 1/17/14	11
4721	Integration Test Scripts - LHPedSkin	5 wks	Mon 12/16/13	Fri 1/17/14	11
4722	Integration Test Scripts - LHRapidRespTm	5 wks	Mon 12/16/13	Fri 1/17/14	11
4723	Integration Test Scripts - LHReadmission	5 wks	Mon 12/16/13	Fri 1/17/14	11

ID	Task Name	Duration	Start	Finish	Predecessors
4724	Integration Test Scripts - LHRestraints	5 wks	Mon 12/16/13	Fri 1/17/14	11
4725	Integration Test Scripts - LHSepsis	5 wks	Mon 12/16/13	Fri 1/17/14	11
4726	Integration Test Scripts - LHStroke	5 wks	Mon 12/16/13	Fri 1/17/14	11
4727	Integration Test Scripts - LHSurgQual	5 wks	Mon 12/16/13	Fri 1/17/14	11
4728	Integration Test Scripts - LHUrinaryIncontAd	5 wks	Mon 12/16/13	Fri 1/17/14	11
4729	Integration Test Scripts - LHVTEPrevention	5 wks	Mon 12/16/13	Fri 1/17/14	11
4730	Complete Integration Testing - LHActivityTolerance	4 wks	Mon 1/20/14	Fri 2/14/14	4700
4731	Complete Integration Testing - LHAnemia	4 wks	Mon 1/20/14	Fri 2/14/14	4701
4732	Complete Integration Testing - LHAnticoag	4 wks	Mon 1/20/14	Fri 2/14/14	4702
4733	Complete Integration Testing - LHCathRelinfection	4 wks	Mon 1/20/14	Fri 2/14/14	4703
4734	Complete Integration Testing - LHCAP	4 wks	Mon 1/20/14	Fri 2/14/14	4704
4735	Complete Integration Testing - LHCoreMeas	4 wks	Mon 1/20/14	Fri 2/14/14	4705
4736	Complete Integration Testing - LHDeliriumMgmt	4 wks	Mon 1/20/14	Fri 2/14/14	4706
4737	Complete Integration Testing - LHDepressionMgmt	4 wks	Mon 1/20/14	Fri 2/14/14	4707
4738	Complete Integration Testing - LHDysphagia	4 wks	Mon 1/20/14	Fri 2/14/14	4708
4739	Complete Integration Testing - LHFallPed	4 wks	Mon 1/20/14	Fri 2/14/14	4709
4740	Complete Integration Testing - LHFallRisk	4 wks	Mon 1/20/14	Fri 2/14/14	4710
4741	Complete Integration Testing - LHFluidVolExcess	4 wks	Mon 1/20/14	Fri 2/14/14	4711
4742	Complete Integration Testing - LHGlycemic	4 wks	Mon 1/20/14	Fri 2/14/14	4712
4743	Complete Integration Testing - LHHeartFailure	4 wks	Mon 1/20/14	Fri 2/14/14	4713
4744	Complete Integration Testing - LHInfectionControl	4 wks	Mon 1/20/14	Fri 2/14/14	4714
4745	Complete Integration Testing - LHLipidMgmt	4 wks	Mon 1/20/14	Fri 2/14/14	4715
4746	Complete Integration Testing - LHMedicationAdherence	4 wks	Mon 1/20/14	Fri 2/14/14	4716
4747	Complete Integration Testing - LHModSedAdult	4 wks	Mon 1/20/14	Fri 2/14/14	4717
4748	Complete Integration Testing - LHPainMgmt	4 wks	Mon 1/20/14	Fri 2/14/14	4718
4749	Complete Integration Testing - LHPainMgmtPed	4 wks	Mon 1/20/14	Fri 2/14/14	4719
4750	Complete Integration Testing - LHPressureUlcer	4 wks	Mon 1/20/14	Fri 2/14/14	4720
4751	Complete Integration Testing - LHPedSkin	4 wks	Mon 1/20/14	Fri 2/14/14	4721
4752	Complete Integration Testing - LHRapidRespTm	4 wks	Mon 1/20/14	Fri 2/14/14	4722
4753	Complete Integration Testing - LHReadmission	4 wks	Mon 1/20/14	Fri 2/14/14	4723
4754	Complete Integration Testing - LHRestraints	4 wks	Mon 1/20/14	Fri 2/14/14	4724
4755	Complete Integration Testing - LHSepsis	4 wks	Mon 1/20/14	Fri 2/14/14	4725
4756	Complete Integration Testing - LHStroke	4 wks	Mon 1/20/14	Fri 2/14/14	4726

ID	Task Name	Duration	Start	Finish	Predecessors
4757	Complete Integration Testing - LHSurgQual	4 wks	Mon 1/20/14	Fri 2/14/14	4727
4758	Complete Integration Testing - LHUrinaryIncontAd	4 wks	Mon 1/20/14	Fri 2/14/14	4728
4759	Complete Integration Testing - LHVTEPrevention	4 wks	Mon 1/20/14	Fri 2/14/14	4729
4760	Milestone: Conclude All Testing - LightHouse	0 days	Fri 4/11/14	Fri 4/11/14	4608,4609,4610,4611,
4761	**CONVERSION**	**32 wks**	**Mon 2/10/14**	**Fri 9/19/14**	
4762	**Preparing for Conversion**	**25 wks**	**Mon 2/10/14**	**Fri 8/1/14**	
4763	Review & Update Conversion Readiness Assessment - LHActivityTolerance	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4764	Review & Update Conversion Readiness Assessment - LHAnemia	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4765	Review & Update Conversion Readiness Assessment - LHAnticoag	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4766	Review & Update Conversion Readiness Assessment - LHCathRelinfection	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4767	Review & Update Conversion Readiness Assessment - LHCAP	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4768	Review & Update Conversion Readiness Assessment - LHCoreMeas	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4769	Review & Update Conversion Readiness Assessment - LHDeliriumMgmt	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4770	Review & Update Conversion Readiness Assessment - LHDepressionMgmt	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4771	Review & Update Conversion Readiness Assessment - LHDysphagia	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4772	Review & Update Conversion Readiness Assessment - LHFallPed	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4773	Review & Update Conversion Readiness Assessment - LHFallRisk	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4774	Review & Update Conversion Readiness Assessment - LHFluidVolExcess	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4775	Review & Update Conversion Readiness Assessment - LHGlycemic	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4776	Review & Update Conversion Readiness Assessment - LHHeartFailure	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4777	Review & Update Conversion Readiness Assessment - LHInfectionControl	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4778	Review & Update Conversion Readiness Assessment - LHLipidMgmt	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4779	Review & Update Conversion Readiness Assessment - LHMedicationAdherence	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4780	Review & Update Conversion Readiness Assessment - LHModSedAdult	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4781	Review & Update Conversion Readiness Assessment - LHPainMgmt	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4782	Review & Update Conversion Readiness Assessment - LHPainMgmtPed	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4783	Review & Update Conversion Readiness Assessment - LHPressureUlcer	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4784	Review & Update Conversion Readiness Assessment - LHPedSkin	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4785	Review & Update Conversion Readiness Assessment - LHRapidRespTm	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4786	Review & Update Conversion Readiness Assessment - LHReadmission	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4787	Review & Update Conversion Readiness Assessment - LHRestraints	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4788	Review & Update Conversion Readiness Assessment - LHSepsis	1 wk	Mon 2/10/14	Fri 2/14/14	12SS

ID	Task Name	Duration	Start	Finish	Predecessors
4789	Review & Update Conversion Readiness Assessment - LHStroke	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4790	Review & Update Conversion Readiness Assessment - LHSurgQual	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4791	Review & Update Conversion Readiness Assessment - LHUrinaryIncontAd	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4792	Review & Update Conversion Readiness Assessment - LHVTEPrevention	1 wk	Mon 2/10/14	Fri 2/14/14	12SS
4793	Review & Update Conversion Cutover Plan (sent by IA) - LHActivityTolerance	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4794	Review & Update Conversion Cutover Plan (sent by IA) - LHAnemia	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4795	Review & Update Conversion Cutover Plan (sent by IA) - LHAnticoag	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4796	Review & Update Conversion Cutover Plan (sent by IA) - LHCathRelinfection	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4797	Review & Update Conversion Cutover Plan (sent by IA) - LHCAP	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4798	Review & Update Conversion Cutover Plan (sent by IA) - LHCoreMeas	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4799	Review & Update Conversion Cutover Plan (sent by IA) - LHDeliriumMgmt	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4800	Review & Update Conversion Cutover Plan (sent by IA) - LHDepressionMgmt	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4801	Review & Update Conversion Cutover Plan (sent by IA) - LHDysphagia	1 wk	Mon 4/14/14	Fri 4/18/14	14SS
4802	Review & Update Conversion Cutover Plan (sent by IA) - LHFallPed	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4803	Review & Update Conversion Cutover Plan (sent by IA) - LHFallRisk	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4804	Review & Update Conversion Cutover Plan (sent by IA) - LHFluidVolExcess	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4805	Review & Update Conversion Cutover Plan (sent by IA) - LHGlycemic	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4806	Review & Update Conversion Cutover Plan (sent by IA) - LHHeartFailure	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4807	Review & Update Conversion Cutover Plan (sent by IA) - LHInfectionControl	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4808	Review & Update Conversion Cutover Plan (sent by IA) - LHLipidMgmt	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4809	Review & Update Conversion Cutover Plan (sent by IA) - LHMedicationAdherence	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4810	Review & Update Conversion Cutover Plan (sent by IA) - LHModSedAdult	1 wk	Mon 4/21/14	Fri 4/25/14	14SS
4811	Review & Update Conversion Cutover Plan (sent by IA) - LHPainMgmt	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4812	Review & Update Conversion Cutover Plan (sent by IA) - LHPainMgmtPed	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4813	Review & Update Conversion Cutover Plan (sent by IA) - LHPressureUlcer	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4814	Review & Update Conversion Cutover Plan (sent by IA) - LHPedSkin	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4815	Review & Update Conversion Cutover Plan (sent by IA) - LHRapidRespTm	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4816	Review & Update Conversion Cutover Plan (sent by IA) - LHReadmission	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4817	Review & Update Conversion Cutover Plan (sent by IA) - LHRestraints	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4818	Review & Update Conversion Cutover Plan (sent by IA) - LHSepsis	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4819	Review & Update Conversion Cutover Plan (sent by IA) - LHStroke	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4820	Review & Update Conversion Cutover Plan (sent by IA) - LHSurgQual	1 wk	Fri 4/25/14	Thu 5/1/14	14SS

ID	Task Name	Duration	Start	Finish	Predecessors
4821	Review & Update Conversion Cutover Plan (sent by IA) - LHUrinaryIncontAd	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4822	Review & Update Conversion Cutover Plan (sent by IA) - LHVTEPrevention	1 wk	Fri 4/25/14	Thu 5/1/14	14SS
4823	Complete the Turnover Process document for LHActivityTolerance	5 wks	Mon 6/30/14	Fri 8/1/14	18
4824	Complete the Turnover Process document for LHAnemia	5 wks	Mon 6/30/14	Fri 8/1/14	18
4825	Complete the Turnover Process document for LHAnticoag	5 wks	Mon 6/30/14	Fri 8/1/14	18
4826	Complete the Turnover Process document for LHCathRelinfection	5 wks	Mon 6/30/14	Fri 8/1/14	18
4827	Complete the Turnover Process document for LHCAP	5 wks	Mon 6/30/14	Fri 8/1/14	18
4828	Complete the Turnover Process document for LHCoreMeas	5 wks	Mon 6/30/14	Fri 8/1/14	18
4829	Complete the Turnover Process document for LHDeliriumMgmt	5 wks	Mon 6/30/14	Fri 8/1/14	18
4830	Complete the Turnover Process document for LHDepressionMgmt	5 wks	Mon 6/30/14	Fri 8/1/14	18
4831	Complete the Turnover Process document for LHDysphagia	5 wks	Mon 6/30/14	Fri 8/1/14	18
4832	Complete the Turnover Process document for LHFallPed	5 wks	Mon 6/30/14	Fri 8/1/14	18
4833	Complete the Turnover Process document for LHFallRisk	5 wks	Mon 6/30/14	Fri 8/1/14	18
4834	Complete the Turnover Process document for LHFluidVolExcess	5 wks	Mon 6/30/14	Fri 8/1/14	18
4835	Complete the Turnover Process document for LHGlycemic	5 wks	Mon 6/30/14	Fri 8/1/14	18
4836	Complete the Turnover Process document for LHHeartFailure	5 wks	Mon 6/30/14	Fri 8/1/14	18
4837	Complete the Turnover Process document for LHInfectionControl	5 wks	Mon 6/30/14	Fri 8/1/14	18
4838	Complete the Turnover Process document for LHLipidMgmt	5 wks	Mon 6/30/14	Fri 8/1/14	18
4839	Complete the Turnover Process document for LHMedicationAdherence	5 wks	Mon 6/30/14	Fri 8/1/14	18
4840	Complete the Turnover Process document for LHModSedAdult	5 wks	Mon 6/30/14	Fri 8/1/14	18
4841	Complete the Turnover Process document for LHPainMgmt	5 wks	Mon 6/30/14	Fri 8/1/14	18
4842	Complete the Turnover Process document for LHPainMgmtPed	5 wks	Mon 6/30/14	Fri 8/1/14	18
4843	Complete the Turnover Process document for LHPressureUlcer	5 wks	Mon 6/30/14	Fri 8/1/14	18
4844	Complete the Turnover Process document for LHPediSkin	5 wks	Mon 6/30/14	Fri 8/1/14	18
4845	Complete the Turnover Process document for LHRapidResponseTm	5 wks	Mon 6/30/14	Fri 8/1/14	18
4846	Complete the Turnover Process document for LHReadmission	5 wks	Mon 6/30/14	Fri 8/1/14	18
4847	Complete the Turnover Process document for LHRestraints	5 wks	Mon 6/30/14	Fri 8/1/14	18
4848	Complete the Turnover Process document for LHSepsis	5 wks	Mon 6/30/14	Fri 8/1/14	18
4849	Complete the Turnover Process document for LHStroke	5 wks	Mon 6/30/14	Fri 8/1/14	18
4850	Complete the Turnover Process document for LHSurgQual	5 wks	Mon 6/30/14	Fri 8/1/14	18
4851	Complete the Turnover Process document for LHUrinaryIncontAd	5 wks	Mon 6/30/14	Fri 8/1/14	18
4852	Complete the Turnover Process document for LHVTEPrevention	5 wks	Mon 6/30/14	Fri 8/1/14	18
4853	**Post Conversion Assessment**	**2 wks**	**Mon 9/8/14**	**Fri 9/19/14**	

ID	Task Name	Duration	Start	Finish	Predecessors
4854	Complete Post Conversion Assessment Workbook for LHActivityTolerance	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4855	Complete Post Conversion Assessment Workbook for LHAnemia	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4856	Complete Post Conversion Assessment Workbook for LHAnticoag	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4857	Complete Post Conversion Assessment Workbook for LHCathRelinfection	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4858	Complete Post Conversion Assessment Workbook for LHCAP	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4859	Complete Post Conversion Assessment Workbook for LHCoreMeas	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4860	Complete Post Conversion Assessment Workbook for LHDeliriumMgmt	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4861	Complete Post Conversion Assessment Workbook for LHDepressionMgmt	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4862	Complete Post Conversion Assessment Workbook for LHDysphagia	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4863	Complete Post Conversion Assessment Workbook for LHFallPed	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4864	Complete Post Conversion Assessment Workbook for LHFallRisk	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4865	Complete Post Conversion Assessment Workbook for LHFluidVolExcess	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4866	Complete Post Conversion Assessment Workbook for LHGlycemic	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4867	Complete Post Conversion Assessment Workbook for LHHeartFailure	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4868	Complete Post Conversion Assessment Workbook for LHInfectionControl	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4869	Complete Post Conversion Assessment Workbook for LHLipidMgmt	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4870	Complete Post Conversion Assessment Workbook for LHMedicationAdherence	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4871	Complete Post Conversion Assessment Workbook for LHModSedAdult	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4872	Complete Post Conversion Assessment Workbook for LHPainMgmt	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4873	Complete Post Conversion Assessment Workbook for LHPainMgmtPed	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4874	Complete Post Conversion Assessment Workbook for LHPressureUlcer	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4875	Complete Post Conversion Assessment Workbook for LHPedSkin	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4876	Complete Post Conversion Assessment Workbook for LHRapidRespTm	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4877	Complete Post Conversion Assessment Workbook for LHReadmission	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4878	Complete Post Conversion Assessment Workbook for LHRestraints	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4879	Complete Post Conversion Assessment Workbook for LHSepsis	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4880	Complete Post Conversion Assessment Workbook for LHStroke	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4881	Complete Post Conversion Assessment Workbook for LHSurgQual	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4882	Complete Post Conversion Assessment Workbook for LHUrinaryIncontAd	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4883	Complete Post Conversion Assessment Workbook for LHVTEPrevention	2 wks	Mon 9/8/14	Fri 9/19/14	24SS
4884	**SOW #23 - Deployment**	**161.2 wks**	**Mon 12/24/12**	**Mon 1/25/16**	
4885	**Task 1: Conduct SOW Kick-off**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	

ID	Task Name	Duration	Start	Finish	Predecessors
4886	Subtask 1.1 Develop Detailed Deployment-Specific Section of the Sub-Project Work Plan	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
4887	Subtask 1.2 Initiation Session for Deployment Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
4888	**Task 2: Validate and Maintain Deployment Strategy**	**73.1 wks**	**Mon 11/18/13**	**Mon 4/13/15**	
4889	Subtask 2.1 Validate and Maintain Deployment Strategy	2 mons	Mon 11/18/13	Fri 1/10/14	18FS-8 mons
4890	Subtask 2.2 Deployment Strategy Reassement Meeting	4 hrs	Mon 4/13/15	Mon 4/13/15	27FS+2 mons
4891	**Task 3 Conduct Deployment Preparation**	**4 wks**	**Mon 5/5/14**	**Fri 5/30/14**	
4892	Subtask 3.1 Develop Go-Live Go/No-Go Decision Framework and Processes	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4893	Subtask 3.2 Develop Backfill Procedures	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4894	Subtask 3.3 Develop Go-Live Event Staffing and Support Model	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4895	Subtask 3.4 Develop Go-Live Help Desk Scripts	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4896	Subtask 3.5 Develop Operations and Administration Procedures Related to the Deployment	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4897	Subtask 3.6 Develop Deployment and Project Close-out Checklist	4 wks	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4898	Subtask 3.7 Develop Solution Readiness Framework	1 mon	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4899	**Task 4 Conduct Readiness Assessments**	**1 wk**	**Mon 4/29/13**	**Fri 5/3/13**	
4900	Subtask 4.1 Conduct Technical Readiness Assessment	1 wk	Mon 4/29/13	Fri 5/3/13	502SS
4901	Subtask 4.2 Conduct Functional Readiness Assessment	1 wk	Mon 4/29/13	Fri 5/3/13	502SS
4902	Subtask 4.3 Conduct Location Readiness Assessment	1 wk	Mon 4/29/13	Fri 5/3/13	502SS
4903	**Task 5 Conduct Production Cutover Planning**	**12 wks**	**Mon 4/7/14**	**Fri 6/27/14**	
4904	Subtask 5.1 Develop Production Cutover Plan	1 mon	Mon 5/5/14	Fri 5/30/14	18FS-2 mons
4905	Subtask 5.2 Develop Emergency Roll-back Plan	2 wks	Mon 4/7/14	Fri 4/18/14	18FS-3 mons
4906	Subtask 5.3 Conduct Go-Live Go/No-Go Meetings	1 mon	Mon 6/2/14	Fri 6/27/14	4892
4907	**Task 6 Initiate Remote Hosting Services for Production Environment**	**1 wk**	**Mon 5/5/14**	**Fri 5/9/14**	
4908	Subtask 6.1 Initiate Remote Hosting Services for Production Environment	1 wk	Mon 5/5/14	Fri 5/9/14	18FS-2 mons
4909	**Task 7 Conduct Cutover Test**	**1 wk**	**Mon 6/2/14**	**Fri 6/6/14**	
4910	Subtask 7.1 Conduct Cutover Test	1 wk	Mon 6/2/14	Fri 6/6/14	4904
4911	**Task 8 Deploy Licensed Software and Third Party Products**	**1 wk**	**Mon 6/23/14**	**Fri 6/27/14**	
4912	Subtask 8.1 Conduct Deployment	1 wk	Mon 6/23/14	Fri 6/27/14	18SS
4913	**Task 9 Provide Post-Deployment Support**	**6 wks**	**Mon 6/30/14**	**Fri 8/8/14**	
4914	Subtask 9.1 Provide Post Go-Live Support	1 mon	Mon 6/30/14	Fri 7/25/14	4912
4915	Subtask 9.2 Transition to Application Management Services (AMS)	1 wk	Mon 7/28/14	Fri 8/1/14	4914
4916	Subtask 9.3 Conduct Post Go-Live Assessment	1 wk	Mon 8/4/14	Fri 8/8/14	4915

ID	Task Name	Duration	Start	Finish	Predecessors
4917	**Task 10 Conduct Performance Verification and Provide Performance Verification Report**	**2 wks**	**Mon 7/28/14**	**Fri 8/8/14**	
4918	Subtask 10.1 Conduct Performance Verification Activities	2 wks	Mon 7/28/14	Fri 8/8/14	4914
4919	**Task 11 Develop Final Acceptance Deliverable**	**0.2 wks**	**Mon 1/25/16**	**Mon 1/25/16**	
4920	Subtask 11.1 Provide Documented Final Acceptance Deliverable	1 day	Mon 1/25/16	Mon 1/25/16	32FS+2 mons
4921	**SOW #24 - Support Services, Maintenance & Operations**	**85 wks**	**Mon 12/24/12**	**Fri 8/8/14**	
4922	**Task 1 Conduct SOW Kick-off**	**21 wks**	**Mon 12/24/12**	**Fri 5/17/13**	
4923	Subtask 1.1 Develop Sub-Project Work Plan for M&O	1 wk	Mon 12/24/12	Fri 12/28/12	7SS-5 mons
4924	Subtask 1.2 Conduct Initiation Session for M&O Workgroup	1 wk	Mon 5/13/13	Fri 5/17/13	7SS
4925	**Task 2 Conduct Production Support Planning**	**10 wks**	**Mon 6/2/14**	**Fri 8/8/14**	
4926	Subtask 2.1 Develop and Maintain Production Support Plan	1 mon	Mon 6/2/14	Fri 6/27/14	4914FS-2 mons
4927	Subtask 2.2 Compile EHR System and User Documentation for Handover to Production Support	1 mon	Mon 6/2/14	Fri 6/27/14	4914FS-2 mons
4928	Subtask 2.3 Define Contractor Process for Notifying County of Security Issues	2 wks	Mon 7/28/14	Fri 8/8/14	4914
4929	Subtask 2.4 Define Contractor Process for Notifying County of Issues and Events impacting Operations	2 wks	Mon 7/28/14	Fri 8/8/14	4914
4930	Subtask 2.5 Define Requirements for Systems, Tools and Interfaces for IT Service Management	2 wks	Mon 6/30/14	Fri 7/11/14	4914FS-1 mon
4931	**Task 3 Provide Application Management Services (AMS)**	**2 wks**	**Mon 7/14/14**	**Fri 7/25/14**	
4932	Subtask 3.1 Establish AMS Delivery Model for County	0.5 wks	Mon 7/14/14	Wed 7/16/14	4933FS-2 wks
4933	Subtask 3.2 Provide Application Monitoring and Management	0 days	Fri 7/25/14	Fri 7/25/14	4914
4934	Subtask 3.3 Provide 24x7x365 Application Support	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4935	Subtask 3.4 Provide Operations Management	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4936	Subtask 3.5 Provide Report Creation and Maintenance	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4937	Subtask 3.6 Conduct Maintenance Checks	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4938	Subtask 3.7 Implement Licensed Software Configuration Requests	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4939	Subtask 3.8 Provide Incident/Problem Management and Resolution	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4940	Subtask 3.9 Implement New Releases and Licensed Software Upgrades	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4941	Subtask 3.10 Provide Content Management	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4942	Subtask 3.11 Conduct Service Level Monitoring and Reporting	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4943	Subtask 3.12 Provide Technology Change Management	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4944	Subtask 3.13 Provide Configuration Management	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4945	Subtask 3.14 Provide Interface Support	0 wks	Fri 7/25/14	Fri 7/25/14	4914

ID	Task Name	Duration	Start	Finish	Predecessors
4946	Subtask 3.15 Maintain Security and Manage Authorization Controls and Processes	0 wks	Fri 7/25/14	Fri 7/25/14	4914
4947	**Task 4 Initiate and Provide Hosting Services**	**4 wks**	**Mon 4/14/14**	**Fri 5/9/14**	
4948	Subtask 4.1 Prepare Hosting Services Delivery Model	2 wks	Mon 4/14/14	Fri 4/25/14	4949FS-1 mon
4949	Subtask 4.2 Provide Hosting Services	0 days	Fri 5/9/14	Fri 5/9/14	4908
4950	Subtask 4.3 Conduct Service Level Monitoring and Reporting	0 wks	Fri 5/9/14	Fri 5/9/14	4908
4951	Subtask 4.4 Respond to Support Service Requests	0 wks	Fri 5/9/14	Fri 5/9/14	4908
4952	Subtask 4.5 Maintain Security	0 wks	Fri 5/9/14	Fri 5/9/14	4908
4953	Subtask 4.6 Conduct Backups and Restores	0 wks	Fri 5/9/14	Fri 5/9/14	4908
4954	Subtask 4.7 Provide Business Continuity and Disaster Recovery Services	0 wks	Fri 5/9/14	Fri 5/9/14	4908
4955	**Task 5 Conduct Ongoing Training Activities**	**11 wks**	**Fri 5/9/14**	**Fri 7/25/14**	
4956	Subtask 5.1 Support Training on Revisions	0 days	Fri 7/25/14	Fri 7/25/14	4914
4957	Subtask 5.2 Maintain LearningLIVE Environment	0 days	Fri 5/9/14	Fri 5/9/14	4947
4958	Final Acceptance by County	0 days	Fri 1/29/16	Fri 1/29/16	4920FS+4 days

Exhibit A.25.2 (Project Staffing and Resource Management Plan)

to the

Electronic Health Records System and Services Agreement

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1. Project Staffing and Resource Management Plan

This is the Project Staffing and Resource Management Plan developed by Contractor. This Project Staffing and Resource Management Plan will be utilized to establish fully loaded (identification of FTE equivalent or hours for all resources by Key Milestone) Contractor resource staffing commitments and to detail specific County resources which will guide County on how best to allocate and deploy personnel to this Project. Notwithstanding the foregoing, this is a fixed fee engagement and the Contractor resources identified in the Project Staffing and Resource Management Plan do not limit the resources that may be required by Contractor. This Project Staffing and Resource Management Plan is a resource and tool to assist Contractor and County during the Project. The Project Staffing and Resource Management Plan is governed by the Agreement (including the Exhibits, Statements of Work, Attachments, and Schedules) and will not reduce, change, modify or alter Contractor's obligations under the Agreement. Contractor may be subject to additional requirements pursuant to the Agreement. In the event of conflicting terms between the Agreement and this Project Staffing and Resource Management Plan, the terms of the Agreement shall prevail and nothing in the Project Staffing and Resource Management Plan shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.).

This Project Staffing and Resource Management Plan provides a description of:

- Fully loaded Contractor resource staffing commitments (i.e., identification of FTE equivalent or hours for all resources by Key Milestone);
- Project organizational chart that aligns with Contractor Licensed Software, Third-Party Products, and work streams documented in the SOWs;
- Mapping of staffing to the roles, responsibilities, and activities of the PWP;
- Reporting relationships;
- Description of other resources such as conference rooms, training rooms, connectivity, calendars, etc.;
- Education Tracker to monitor training received or required for specific County staff/roles;
- Guidelines for knowledge transfer between County personnel as they change roles, leave, or join the project.

2. Fully loaded Contractor resource staffing commitments

Contractor will assign a half time Client Results Executive to own Project execution and results.

Contractor will provide full time Engagement Leadership that consists of the following: Project Director, Engagement Leader, Integration Architect and Clinical Strategist.

A Practice Manager and Engagement Controller will also be a part of the Engagement Leadership and will support mainly from Kansas City.

A Healthcare Executive and Physician Strategist will be half time on the Project and will assist in the Physician adoption space.

Contractor will assign a Learning Consultant half time to assist with training. Contractor will also provide Delivery Consultants and Solution Architects as part of the implementation team who are responsible for providing Contractor solution expertise needed for a successful implementation.

During key events the Delivery Consultants and Solution Architects will be fully dedicated. During non-event weeks, Contractor will use a leveraged resource model. The leveraged resource model consists of a number of resources working full-time or part time as a team to complete the specific Deliverable. The FTE count provided for the leveraged model activities is the projected aggregate of the effort expended by a larger group of people, not individuals working full time.

Contractor will also provide a technology team that consists of Interface Architects, System Engineers and Technology Consultants. This team will be led by a Technical Engagement Leader and Hosting Services Technical Engagement Leader.

A description of the Contractor roles and responsibilities can be found in Appendix A to this Exhibit A.25.2 (Staffing and Resource Management Plan).

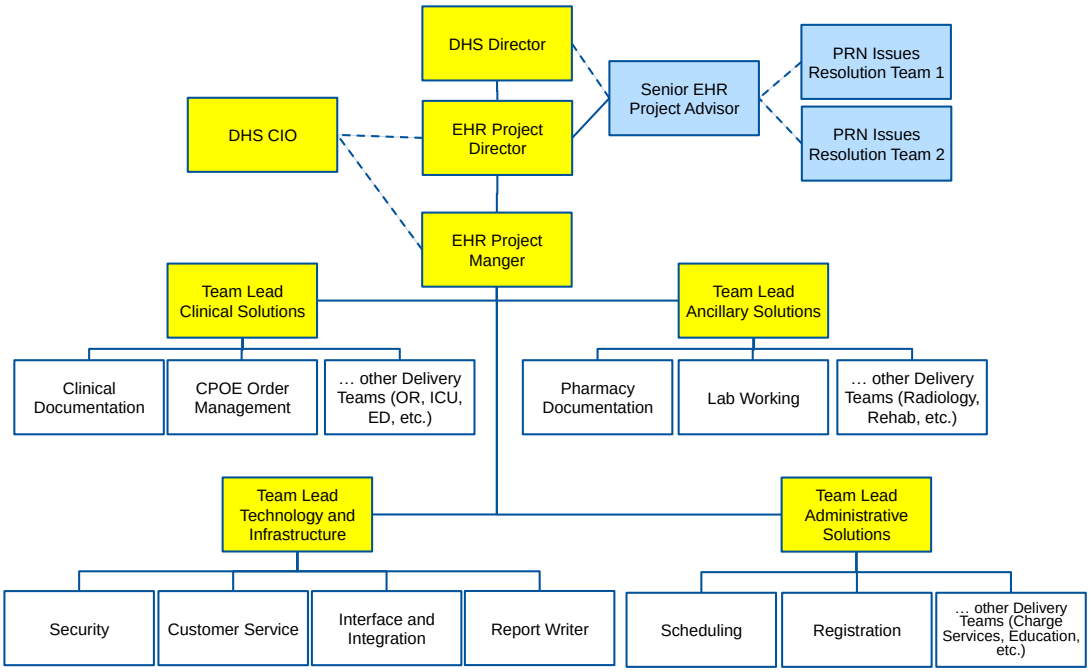
An initial version of the projected time allocation of these roles can be found in Attachment A to this Exhibit A.25.2 (Staffing and Resource Management Plan). The allocations will be validated and refined for each SOW as part of the development of the SOW specific Sub-Project Work Plans as described in subtask 1.1 of Exhibit A.2 – A.22.

3. Project Organizational Chart

The Project will have both an integrated structure which provides both management and direction for day-to-day Project delivery, and an overall mechanism for providing decision and direction in an expedited manner.

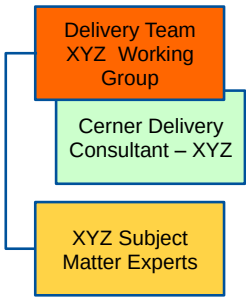
There will be an overall Project management office staffed by a Project manager and the necessary administrative and logistical support. Reporting in to the Project manager will be a number of teams.

The structure of the teams and their reporting relationships will be as follows (the blue boxes are decision making groups, the yellow boxes are management and leadership individuals, the white boxes are the delivery teams):



The delivery teams will be made up of three components as follows:

The County Workgroups are comprised of County resources including a team lead (also referred to as an IT Analyst) and key members who will be responsible for data gathering, design decisions, and content decisions. The Subject Matter Experts are County resources who provide information and advice to the County Workgroup on an as- and when-needed basis. The Contractor Delivery Consultant is a Contractor resource that provides facilitation and direction for the County Workgroup, and provides direction and leadership for the Contractor build team.



The decision-making groups provide consistent management, cohesive policies, guidance, processes and key resources. They optimize communication across teams, and support integration across disciplines and arrive at decisions. The senior EHR Project advisor is a senior knowledgeable individual, who will take input from all relevant avenues and provide advice and direction to the EHR Project Director related to overall DHS enterprise level EHR Project questions and issues. The PRN Issue Resolution Teams (PIRTs) are constituted of senior practitioners and thought leaders in specific subject matter or practice areas. County Workgroup leads and the County Project Director will escalate questions of practice, design, and policy for rapid resolution by these teams.

4. Mapping of Staffing to the Roles, Responsibilities, and Activities of the PWP

The spreadsheet provided in Attachment A provides the mapping of staffing to the roles, responsibilities, and activities of the PWP.

5. Reporting Relationships

Contractor will partner with County to align resources to ensure that the team is in communication and working towards common goals.

The below tables helps to identify suggested County resources and their Contractor counterparts:

County	Contractor
Executive Leadership	Client Results Executive
County Project Director	Contractor Project Director
County Project Manager	Engagement Leader (Contractor Project Manager)
Process/Integration Architect	Integration Architect
Physician Champions	Health Care Executive/Physician Strategist
Transformation/Adoption Coordinator	Clinical Strategist
Subject Matter Experts/Analysts (County Workgroups)	Solution Architect/Delivery Consultant
Education Coordinator	Learning Consultant

Other reporting relationships are described in the Project operational structure and the Project governance structure above.

6. Description of Other Resources Such as Conference Rooms, Training Rooms, Connectivity, Calendars

The following table provides a sample outline of the types of facilities and resources that the Contractor Project team will need for all of its on-site work. This table is for illustrative purposes only to aid the Parties in the deployment of County facilities resources. Actual available County facilities resources will be allocated by County in consultation with Contractor.

Contractor

Sample Hospital Space Requirements				
Type	**Quantity**	**Contents**	**Identified Location**	**Note**

Packager space **in Pharmacy**	**1**	40 5/8 in wide and 31 1/8 in depth, 77 3/8in high		Packager needs to be located in pharmacy workspace. This is the maximum space requirement. Exact space requirements will be determined pursuant to the applicable Statements of Work.
Training	**1 room for duration of project**	1 - 3 tables/room		Training and knowledge transfer will occur as set forth in Exhibit A.22 (Training and Knowledge Transfer Statement of Work)
	1 - 4 additional rooms for Super User and End User training **(See Training Plan)**	4 - 10 Chairs/room		
		4 - 8 PC's, 1 Cart (covered by Global budget)/room		
		1 Printer (covered by Global budget)		
		1 Phone/per room		
		Cabling for printer and PC's		
Delivery Team Workroom	**1**	2 Tables		Needed for duration of Project.
		6 - 10 Chairs		
		1 Printer (covered by Global budget)		
		1 speaker phone		
Meeting Room	**1**	Table and Chairs enough for all project dept managers and project leads.		Ad hoc for duration of Project.
Command Center	**1**	Conference room large enough for 25 - 40 resources		Command Center resources will be required as set forth in Exhibit A.23 (Deployment Statement of Work)

7. Education Tracker

The Education Tracker list will be found as a link on the navigation panel under MethodM Project home.

This list is used to provide the County Project team with a list of education assignments they will need to complete during the Project such as Fundamentals, WBTs, Open House domain review and build coaching sessions leading up to the Contractor build maintenance event.

Assignments will be marked as complete and the list will serve as a tracking mechanism that can be leveraged by the County education coordinator.

Edit	Solution	Delivery Order	Expected Completion Date	Topic	Education Item	Assigned To	Status	Activities	Comments/Type
	Care Documentation	01		Attend Millennium Fundamentals Session	Millennium Fundamentals		New		
	Care Documentation	02		Access Open House Scripts and the domain to become familiar with your solution	Open House Scripts		New		
	Care Documentation	03		Complete the Web Based Training for your solution	Solution WBTs		New		
	Care Documentation	BCS Topic 01		Nomenclature, DTA	Build Coaching Sessions		New		
	Care Documentation	BCS Topic 02		IView Band Build, Prefs (Bedrock)	Build Coaching Sessions		New		
	Care Documentation	BCS Topic 03		IV Drips, Advanced Graphing	Build Coaching Sessions		New		
	Care Documentation	BCS Topic 04		Powerform Sections	Build Coaching Sessions		New		
	Care Documentation	BCS Topic 05		Powerform Form Build	Build Coaching Sessions		New		
	Care Documentation	BCS Topic 06		Clinical Doc Management Tool	Build Coaching Sessions		New		

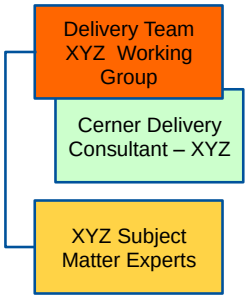
8. Guidelines for Knowledge Transfer between County Personnel as They Change Roles, Leave, or Join the Project.

8.1 Overview

Knowledge transfer takes place when subject matter expertise and information are passed from one person to another person (e.g., County staff to County staff, or Contractor staff to County staff). Knowledge transfer will be incorporated into many aspects of the Project through the use of collaborative teams, shared responsibility, proven methodologies and processes, and Project infrastructure. This approach will support and facilitate ongoing information sharing and team member collaboration and will provide for immediate and continuous knowledge transfer in both directions, as needed.

8.2 Knowledge Transfer Mechanisms

(a) Project Team Structure



Particular attention has been paid to pairing the County Workgroup Leads with a Contractor Delivery Consultant and pairing County Workgroups with Contractor delivery and build teams.

Not only have collaborative teams and pairings been defined, but also the physical location of Contractor and County team members will be taken into consideration. This supports a collaborative approach to analysis and decision-making that ensures that the necessary parties are not only well informed, but also understand the implications of decisions.

(b) Team Meetings

Weekly Project team lead meetings provide opportunities for communication and knowledge transfer, by Project members reviewing status updates and sharing information regarding outstanding issues. Similar meetings will also occur within the individual teams on a regular basis, to review team specific issues and concerns.

(c) Documentation Strategy and Guidelines

The Contractor documentation strategy will be implemented to ensure complete and consistent access to documentation for the Project. The MethodM repository, structure, and guidelines make the Project documentation easily accessible to all team members and all relevant County staff and leadership. Every

event and Key Deliverable will result in a report which is reviewed by County and revised by Contractor to incorporate County feedback.

(d) **Data Collection Workbooks (DCWs), Design Decision Matrix (DDM), and Partial System Build**

The DCW, DDM, and Initial Partial System Build are all mechanisms whereby the Contractor educates County staff on the process and then facilitates an active engagement in requirements definition and confirmation of the fit between the functionality delivered and the requirements. The County Workgroups are comprised of individuals who have the necessary knowledge on the particular topic, and significant interest in the outcome of decisions. Since not all interested parties can be included, the participants have a responsibility to keep their constituents apprised of the proceedings.

(e) **Work Transition**

During the early stages of the Project, Contractor will, of necessity, carry the bulk of the workload, in terms of research, creation of presentation materials and leadership during the sessions. As the requirements gathering process progresses and then again through the implementation process, more of the responsibility will shift to the County teams. This transition will allow the Project team members to gain credibility and legitimacy within the County so that the team members will be able to play a role in supporting and encouraging use of the solution in their functional areas of expertise.

(f) **Project Communications Strategy**

A Project Communications Strategy is a Deliverable for the Project. It will be used to ensure the timely and effective communication of information to help staff prepare for the changes introduced by the Project. Effective Project communication will facilitate the identification of knowledge transfer and training issues.

(g) **Training**

Web and instructor-led training will provide the primary source of knowledge transfer for the bulk of the County's users. Targeted training courses will be scheduled using a "just in time" approach, so that knowledge learned will be put to use in a timely fashion and not forgotten.

(h) **Requirements and Design Reviews**

All designs and the iterative release of functionality will be reviewed and approved by the County teams. This provides the County not only with the opportunity to provide input to the design, but also provides another opportunity for knowledge transfer at key points in the Project.

(i) **Regular knowledge transfer review and update**

A recurring topic of knowledge transfer will be added to the County Workgroup Leads meetings to generate discussion and provide a check point to measure our success in the knowledge transfer area. During these discussions, the tools and methods will be critiqued and adjusted as necessary.

Attachment A

Contractor Roles and Responsibilities

Client Results Executive

The main role of the Client Results Executive is to provide guidance around project planning, project scope, risk management, and professional service deployment. The Client Results Executive serves as the Contractor Senior Executive for escalation of project related issues and County satisfaction.

Client Results Executive responsibilities include:

- Maintains executive relationships with senior County management;
- Provides the connection and thought leadership between the County's business strategies and Contractor's core values proposition;
- Participate in monthly Project reviews with Project leadership;
- Overseeing accounts for risk assessment, executive satisfaction, and Project status;
- Works with County Project Manager and Engagement Leader on Project implementation planning;
- Planning and evaluating contracted Project service delivery and cost management;
- Attending steering committee and Project management office meetings;
- Procuring and managing resources to meet contracted Project Deliverables;
- Works with senior County management to address strategic Project related issues, scope, solution, timing, staffing, organizational impact, communications, business process transformation vis-à-vis solution design and capability;
- Serves as the Contractor person responsible for escalation of Project related issues, service delivery and County satisfaction;
- Responsible for making contractual agreements and commitments on behalf of Contractor;
- Participates in analysis of processes, procedures, and outcomes to seek continuous improvement of assigned projects;
- Provides feedback mechanism back into Contractor to improve its processes, procedures and solution for the purpose of building improved levels of ongoing County satisfaction;
- Ensuring the efficiency of the professional services business by monitoring appropriate metrics and adjusting practices accordingly;
- Responsible for maintaining quality and consistency of solution and professional services delivered to County;
- Acts as County advocate to Contractor’s engineering, solution support, technology services, consulting services, executive management and other groups;
- Responsible for Contractor’s Project performance; and
- Other tasks as needed by the Project.

Engagement Leader

The Engagement Leader manages the day-to-day activities of the Project for Contractor. The Engagement Leader works to obtain the necessary resources to support the Project and manage Service delivery.

Engagement Leader responsibilities include:

- Leading Project implementation planning;
- Developing Project Work Plan and Project Schedule, developing or delegating and monitoring development of product implementation work plans, where appropriate;
- Planning and evaluating contracted Project service delivery and cost management;
- Identifying and managing risk and quality assurance issues which arise during the Project;
- Reviewing Project progress regularly with County and Contractor management;
- Organizing and day-to-day oversight of the Contractor Project team;
- Coordinating Contractor Project resources and other Contractor support groups and resolving resource conflicts as needed;
- Monitoring overall Project progress and Milestones;
- Monitoring Project budget from a cost and time perspective;
- Ensuring Project compliance with contract and Contractor quality assurance standards;
- Attending Project management office meetings;
- Managing issue escalation and resolution;
- Complete Contractor consulting standard status reports and Event Summary Reports;
- Own all technical tasks including domain creation and technical staffing. These activities should be coordinated through the Technical Engagement Leader; and
- Other tasks as needed by the Project.

Practice Manager

Works closely with the Contractor engagement management team to ensure Project and delivery priorities are aligned.

Practice Manager responsibilities include:

- Accountable for Project delivery and meeting County expectations;
- Liaison between solutions center and engagement management;
- Assist in initial Project organization, start-up and planning;
- Escalation point for Project delivery;
- Ensure appropriate staffing;
- Monitor and maintain scope alignment;
- Review and update delivery processes to ensure quality measures are supported; and
- Other tasks as needed by the Project.

Engagement Controller

The Engagement Controller role is a key component to the engagement management team. This role provides critical Project management tasks for the Project to insure Project execution is on schedule,

under budget, and within the planned scope. They support the Contractor engagement management team by having a detailed view of Project summary and progress.

Engagement Controller responsibilities include:

- Coordinates event preparations by solidify resources, creates agendas and reserves training rooms;
- Supports engagement management team with issue escalation;
- Support environment/domain planning and management including Regression Testing after code installs, domain copies, reference data domain synchs, and activity deletes;
- Monitors the scope management process;
- Lead and document checkpoint meetings during events and document wrap-ups;
- Monitor session leaders visit summaries for consistency and accuracy after each event;
- Monitor the County's Integration Testing issues list and escalate as necessary;
- Monitor the County's Go-Live readiness assessments;
- Monitor Contractor Navigator (eService) for integration points and ensure all issues are getting resolved in a timely fashion;
- Reviews County satisfaction surveys and provides feedback to Contractor engagement management team; and
- Other tasks as needed by the Project.

Integration Architect

The Integration Architect works across multiple solutions and interacts with the County throughout the Project. They are involved in scope decisions, process assessment, design and build, testing, training and delivering business results. This role identifies key application integration points that may affect design decisions and supports the management of domain strategies, change management and control, and issue management. They function as the application team lead for the Contractor Project team and provide associate mentoring and coaching.

Integration Architect responsibilities include:

- Serve as the integration expert across solutions and Interfaces providing troubleshooting and process expertise;
- Assist with the development of implementation strategies and work plans;
- Support environment/domain planning and management including Regression Testing after code installs, domain copies, reference data domain synchs, and activity deletes;
- Ensure design decisions include considerations across solutions and fall within scope;
- Maintain responsibility for distribution package analysis and installation;
- Mentor and coach Project team members;
- Drive the system validation process and provide guidelines for all levels of implementation testing;
- Assist County in developing appropriate policies and procedures for issue management and change control;
- Monitor Contractor Navigator (eService) for integration points and ensure all issues are getting resolved in a timely fashion;

- Provide leadership for Integration Testing, Reference Data Domain Sync, and Go-Live Readiness;
- Assist with peripheral implementation strategy;
- Attending Project management office meetings; and
- Other tasks as needed by the Project.

Healthcare Executive

The Contractor Healthcare Executive serves as the liaison to the Contractor, medical staff and Project leadership.

Healthcare Executive responsibilities include:

- Providing expert consultation to County physician leadership to facilitate implementation;
- Providing training and expertise for the Physician Champions;
- Sharing physician experiences from other client sites;
- Setting physician expectations on long and short-term EHR System plans and capabilities;
- Providing expertise in leveraging electronic medical records to improve care delivery; and
- Attends physician advisory group meetings, upon request.

Clinical Strategist

The Clinical Strategist is the Contractor counterpart to the County transformation coordinator and works with the Executive Sponsor, Physician Champion, County Project Manager and other County leaders to develop and implement strategies to manage the organizational change associated with system implementation. Change management activities include data gathering and analysis, change planning, coaching, measurement planning, and developing clinician engagement and adoption strategies.

Clinical Strategist responsibilities include:

- Works with Contractor and Project leadership to develop a comprehensive plan for organizational transformation and coordinating that plan with all other Contractor system project activities;
- Assists Contractor and County Project leadership in profiling and risk analysis;
- Supports organizational kick-off events;
- Works with the communications team Lead to identify key stakeholder groups and ensure the Project Communication Strategy meets their information needs;
- Works with operational and clinical leadership to develop and implement a clinician engagement strategy;
- Facilitates gap analysis and change management activities including job impact analysis and policy/procedure analysis;
- Supports business case development and on-going benefits measurement;
- Serves as the PMO subject matter expert on organizational culture and processes;
- Works with education coordinator to ensure learning plan is responsive to the various learning needs and styles of County;
- Identifies and manage risks and change-related issues that arise during the Project;

- Reviews Project progress regularly with County and Contractor management; and
- Other tasks as needed by the Project.

Technical Engagement Leader

The Technical Engagement Leader is the Contractor associate responsible for the overall definition and delivery of technical installation work during the implementation effort. The Technical Engagement Leader is the primary contact for technical issues and provides consultation on technical risk factors that must be addressed to achieve a successful implementation and ensure on-going availability of systems.

Technical Engagement Leader responsibilities include:

- Preparing technical work plan including definition of tasks, task dependencies, estimates and resource requirements;
- Assists the Integration Architect and County Technical Team documenting and communicating their respective architectural and organizational requirements as they relate to the implementation;
- Leading technical assessment of County environment;
- Coordinating and leading all technical knowledge transfer activities with County;
- Consulting with County to establish standardized desktop workstation configuration, software distribution methodology and login procedures;
- Identifying time requirements and working with the Engagement Leader and Technical Manager to schedule appropriate resources;
- Monitoring progress of technology implementation work plan; documents and reports issues to Project management office, as required;
- Ensuring that plans and scripts are prepared for backup and recovery of environments and database;
- Attending Project management office meetings, as technology agenda items required;
- Provide remote support when domain refreshes are performed on County sites;
- Coordinate resources to perform domain refreshes;
- Serve as technical liaison between Project team and Contractor Hosting Services team; and
- Other tasks as needed by the Project

System Engineer

System Engineers are responsible for managing the hardware and system software activities. The System Engineer role can be specialized to software and system install, foreign system Interfaces, and medical device Interfaces. The System Engineer is part of the central technology team and reports to the Contractor Technical Engagement Leader.

System Engineer responsibilities include:

- Performing site preparation analysis with hardware supplier and County personnel;
- Providing installation and site environmental requirements and performing quality assurance management for the hardware and network installation;
- Assisting capacity planning teams in performing capacity analysis;
- Develop Interface specifications for device and system level Interfaces;

- Installing software required for device Interfaces and foreign system Interfaces;
- Helping County personnel implement environment management, operational procedures, Interfaces, and other EHR System software;
- Acting as the primary contact for Interface issues that arise at the County site;
- Provide technical support for installation of Licensed software;
- Providing technology support for testing and Go-Live activities;
- Troubleshooting and resolving system problems and assists in the investigation and resolution of application failures/problems; and
- Other tasks as needed by the Project

Solution Architect

The Solution Architect is responsible for providing Contractor solution expertise needed for successful Licensed Software implementation at a County site. The Solution Architect is heavily involved in the design process to ensure recommended practices are utilized.

Solution Architect responsibilities include:

- Provide solution expertise to Contractor Project team members, as needed;
- Serve as source for recommended practices, both clinical and implementation;
- Work with Project team to identify Project risks and provide resolution;
- Conduct County Current State Assessment and scope review sessions at County facilities during Project Kickoff event;
- Work to evaluate associate progress and capabilities, build status, and project staffing when necessary;
- Review Go-Live Readiness Assessment and provide feedback to Delivery Consultants;
- Conducts QA Checkpoints after design review, trainer and Go-Live preparation and Integration Testing;
- Conduct post-Go-Live Assessment providing feedback to County and appropriate Contractor organizations and/or individuals; and
- Other tasks as needed by the Project.

Delivery Consultant

Responsible for providing Contractor solution expertise needed for successful Licensed Software implementation at a County site. The Delivery Consultant may belong to one or more teams and works with Project leadership to coordinate his/her activities with other members of the team(s). The Delivery Consultant is the primary contact for the County's solution troubleshooting and consultation.

Delivery Consultant responsibilities include:

- Implementing solution design decisions; tailoring application database to meet the unique requirements of the department and County institution;
- Assisting in testing system functionality as well as validating database integrity;
- Providing consultation on process design;
- Providing product specific help to departmental/functional team leaders;
- Instructing County on database build tools;

- Helping plan and organize County train the trainer and end user training;
- Assisting in the development, management and execution of application and medical device and foreign system Interface testing;
- Providing on site Go-Live support;
- Investigating/resolving application problems;
- Escalating major application or systems issues to appropriate Project team members;
- Working closely with the Integration Architect to coordinate/resolve cross department design and implementation issues;
- Coordinate County calls and supporting documentation;
- Meet build and test completion targets for Project;
- Complete and own the Go-Live Readiness Assessment process. Review it with the County during trainer and Go-Live preparation and Integration Testing;
- Effectively communicate solution knowledge, clinical process, progress, status, and resolution to all involved parties; and
- Other tasks as needed by the Project.

8.3 Learning Consultant

The Learning Consultant is a liaison between Contractor's KnowledgeWorks team, the Contractor Project team and County's Project team, stakeholders and end users. Individuals in this role have a strong understanding of learning theory and are able to analyze large amounts of data to create both detail-level and strategic-level plans. The Learning Consultant strives to create both executive-level and individual buy-in to the learning plan. They can also supplement County's education/training team or provide complete outsourcing solutions.

Learning Consultant responsibilities include:

- Conducting learning needs assessments;
- Assisting in development of learning strategy;
- Developing end-user learning tools (e.g., job aides, workbooks, etc.);
- Assisting County in developing course scheduling, registration and participant tracking procedures, if these learning administration systems are not available;
- Recommending training facility changes needed in order to meet County's objectives;
- Coordinating County IS team class enrollment;
- Investigating end user solutions (i.e., CBT);
- Coordinating additional training outside of Agreement;
- Providing physician training;
- Conducting/proctoring end user training; and
- Supporting end users during Go-Live support.

Interface Architect

The Interface Architect is responsible for working with counterparts from Contractor, County and other suppliers to ensure effective and efficient system integration is accomplished.

Interface Architect responsibilities include:

- Develop Interface specifications for EHR System level Interfaces;

- Reviewing architecture design for all Interfaces;
- Helping County personnel design environment management, operational procedures, Interfaces, and other EHR System software
- Acting as the escalation point for Interface issues that arise at County site; and
- Providing technology support for testing and Go-Live activities.

Attachment B

Projected Roles and Time Allocation

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 1 - Overall Project Management														
Project Director		1	1	1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A
Project Manager		1	1	1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A
Clinical Strategist		1	1	1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A
SOW 2 - Project Initiation														
Project Director		1	1	1	1	1	1	1	1	1	1	1	1	1
Project Manager		1	1	1	1	1	1	1	1	1	1	1	1	1
Engagement Controller		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Integration Architect		1	1	1	1	1	1	1	1	1	1	1	1	1
Clinical Strategist		1	1	1	1	1	1	1	1	1	1	1	1	1
SOW 3 - Architecture and Hosting Services														
Project Director		1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Project Manager		1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Integration Architect		1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hosting Services System Engineer		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOW 4 - Registration	**Registration/Benefit Mgmt**													
Care Mgmt Solution Architect		0.25	0.25	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Care Mgmt Delivery Consultant		0.25	0.25	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Registration Solution Architect		0.5	0.5	0.5	0.5	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
Registration Delivery Consultant		0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 5 - Charge Services	**Charge Services**													
Charge Services Solution Architect		0.1	0.1	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Charge Services Delivery Consultant		0.1	0.1	0.25	0.25	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 6 - Scheduling	**Scheduling Mgmt, Medical Necessity, Acute and Ambulatory**													
Scheduling Solution Architect		0.5	0.5	0.5	0.5	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Scheduling Delivery Consultant		0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 7 - Clinical Documentation and Results	**Clinical Office, Advanced Care Doc, Care Compass, Inet, PowerOrders, PC Onoc**													
Ambulatory Solution Architect		1	1	1	1	0.5	1	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Ambulatory Delivery Consultant		1	1	1	1	0.5	1	0.5	N/A	N/A	N/A	N/A	N/A	N/A
CareNet/Inet Solution Architect		1	1	1	1	1	1	0.75	N/A	N/A	N/A	N/A	N/A	N/A
CareNet/Inet Delivery Consultant		1	1	1	1	1	1	0.75	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Maternity Solution Architect		1	1	1	1	0.4	1	0.4	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Maternity Delivery Consultant		1	1	1	1	0.4	1	0.4	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Oncology Solution Architect		0.4	0.4	0.4	0.4	0.25	0.4	0.25	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Oncology Delivery Consultant		0.4	0.4	0.4	0.4	0.25	0.4	0.25	N/A	N/A	N/A	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 8 - Order Mgmt, CPOE & Decision Support	**PowerPlan, CPOE Meds Integration, EMR, PowerNote, PC Onoc, Clin Office,**													
Ambulatory (Clin Office) Solution Architect		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	N/A	N/A	N/A	N/A	N/A	N/A
Ambulatory Delivery Consultant		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	N/A	N/A	N/A	N/A	N/A	N/A
CPOE Solution Architect		1	1	1	1	0.5	1	0.3	N/A	N/A	N/A	N/A	N/A	N/A
CPOE Delivery Consultant		1	1	1	1	0.5	1	0.5	N/A	N/A	N/A	N/A	N/A	N/A
ePrescribing Solution Architect		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
ePrescribing Delivery Consultant		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Oncology Solution Architect		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	N/A	N/A	N/A	N/A	N/A	N/A
PowerChart Oncology Delivery Consultant		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW 7	N/A	N/A	N/A	N/A	N/A	N/A
SOW 9 - Radiology	**Radiology Mgmt, Mammography, Dept Sched Rad**													
Radiology Solution Architect		1	1	1	1	0.1	1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Radiology Delivery Consultant		1	1	1	1	0.4	1	0.25	N/A	N/A	N/A	N/A	N/A	N/A
SOW 10 - Laboratory	**PathNet AP, BB, GL, Micro, HLA, Outreach, Lab Imagining**													

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
PathNet GL Solution Architect		1	1	1	1	0.1	1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
PathNet GL Delivery Consultant		1	1	1	1	0.35	1	0.25	N/A	N/A	N/A	N/A	N/A	N/A
PathNet Micro Solution Architect		1	1	1	1	0.15	1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
PathNet Micro Delivery Consultant		1	1	1	1	0.25	1	0.25	N/A	N/A	N/A	N/A	N/A	N/A
PathNet AP Solution Architect		1	1	1	1	0.2	1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
PathNet AP Delivery Consultant		1	1	1	1	0.15	1	0.3	N/A	N/A	N/A	N/A	N/A	N/A
PathNet BB Solution Architect		1	1	1	1	0.1	1	0.05	N/A	N/A	N/A	N/A	N/A	N/A
PathNet BB Delivery Consultant		1	1	1	1	0.25	1	0.3	N/A	N/A	N/A	N/A	N/A	N/A
PathNet HLA Solution Architect		0.5	0.5	0.5	0.5	0.1	0.5	0.1	N/A	N/A	N/A	N/A	N/A	N/A
PathNet HLA Delivery Consultant		0.5	0.5	0.5	0.5	0.15	0.5	0.15	N/A	N/A	N/A	N/A	N/A	N/A
Outreach Solution Architect		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Outreach Delivery Consultant		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Laboratory Imaging Consultant		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
SOW 11 - Pharmacy and Medication Mgmt	**Inpatient Pharm, Depart Clinical Supply Chain for Pharm**													
Medication Administration (POC) Solution Architect		0.25	0.25	0.25	0.25	0.1	0.25	0.05	N/A	N/A	N/A	N/A	N/A	N/A
Medication Administration (POC) Delivery Consultant		0.25	0.25	0.25	0.25	0.1	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Pharmacy Solution Architect		1	1	1	1	0.5	1	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Pharmacy Delivery Consultant		1	1	1	1	0.6	1	0.6	N/A	N/A	N/A	N/A	N/A	N/A
Supply Chain Solution Architect		0.5	0.5	0.4	0.4	0.25	0.4	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Supply Chain Delivery Consultant		0.5	0.5	0.4	0.4	0.25	0.4	0.25	N/A	N/A	N/A	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 12 - OR and Anesthesiology	**Surgical Mgmt/Surgery Case Tracking Perioperative Nursing Care Mgmt/Scheduling Mgmt for Surgery, Dept Clinical Supply Chain for Surgery**													
SurgiNet Solution Architect		1	1	1	1	0.4	1	0.3	N/A	N/A	N/A	N/A	N/A	N/A
SurgiNet Delivery Consultant		1	1	1	1	0.4	1	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Supply Chain Solution Architect		See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	N/A	N/A	N/A	N/A	N/A	N/A
Supply Chain Delivery Consultant		See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	See SOW 11	N/A	N/A	N/A	N/A	N/A	N/A
SOW 13 - Intensive Care Unit	**Infusion Mgmt, Critical Care**													
CareNet Solution Architect		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW7	See SOW 7	See SOW7	N/A	N/A	N/A	N/A	N/A	N/A
CareNet Delivery Consultant		See SOW 7	See SOW 7	See SOW 7	See SOW 7	See SOW7	See SOW 7	See SOW7	N/A	N/A	N/A	N/A	N/A	N/A
Infusion Mgmt Clinical Strategist		0.25	0.25	0.25	0.25	0.1	0.25	0.1	N/A	N/A	N/A	N/A	N/A	N/A
CareAware Technology Consultant		0.25	0.25	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 14 - Emergency Department	**ED Exitcare, ED Care Mgmt, ED Triage and Tracking, ED Coding and ED Phys Doc**													
FirstNet Solution Architect		1	1	1	1	0.35	1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
FirstNet Delivery Consultant		1	1	1	1	0.4	1	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 15 - Rehabilitation	**Therapies EK for Inpatient and Outpatient Rehabilitation (Nursing and Phys Doc)**													
Therapies Solution Architect		0.5	0.5	0.5	0.5	0.1	0.5	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Therapies Delivery Consultant		0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 16 - Medical Records														
HIM Solution Architect		0.4	0.4	0.4	0.4	0.2	0.4	0.1	N/A	N/A	N/A	N/A	N/A	N/A
HIM Delivery Consultant		0.4	0.4	0.4	0.4	0.2	0.4	0.15	N/A	N/A	N/A	N/A	N/A	N/A
SOW 17 - Clinical Data Repository and Reporting	**Clinical Reporting**													
Solution Architect		0.25	0.25	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A
Delivery Consultant		0.25	0.25	0.25	0.25	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
SOW 18 Data Conversion (Hx Upload)	**Interfaces**													
Interface Architect		0.3	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
System Engineer		0.3	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Radiology Delivery Consultant		0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Laboratory Deliver Consultant		0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
Registration Delivery Consultant		0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOW 19 - Security	**Core, EMPI**													
Core Solution Architect		0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Core Delivery Consultant		0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DeviceWorks Consultant		N/A	N/A	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOW 20 - Interfaces	**Clinical, Financial and Connect Interfaces**													
Clinical FSI Interface Architect		0.25	0.25	0.25	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clinical FSI System Engineer		0.25	0.25	0.25	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Financial FSI Interface Architect		0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Connect System Engineer - FSI		0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Connect Interface Architect		0.25	0.25	0.25	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOW 21 - EHRs System Testing	**ALL**													
Project Director		1	1	1	1	1	1	1	1	1	1	N/A	N/A	N/A
Project Manager		1	1	1	1	1	1	1	1	1	1	N/A	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	1	1	1	N/A	N/A	N/A
Interface Architect		0.1	N/A	0.1	0.5	N/A	0.25	0.1	0.1	0.1	N/A	N/A	N/A	N/A
Quality Center Architect		0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	N/A	N/A	N/A
Delivery Consultant		0.1	N/A	1.5	0.5	27	3	N/A	0.5	0.25	N/A	N/A	N/A	N/A
SOW 22 - Training and Knowledge Transfer														
Project Director		1	1	N/A	N/A	1	1	N/A	1	1	1	N/A	N/A	N/A
Project Manager		1	1	N/A	N/A	N/A	1	N/A	1	1	1	N/A	N/A	N/A
Integration Architect		1	1	N/A	N/A	N/A	1	N/A	1	1	1	N/A	N/A	N/A
Delivery Consultant		5.5	3	N/A	2	N/A	1	N/A	1	1	1	N/A	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
Learning Consultant		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A
Education Coordinator/Training KT Consultant		0.25	N/A	N/A	N/A	N/A	N/A	0.25	0.25	0.25	0.25	N/A	N/A	N/A
SOW 23 - Deployment - Harbor/UCLA	**ALL**													
Engagement Management		2	2	2	2	2	2	2	3	2	2	2	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	2	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	2	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	0.25	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	0.5	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	1	0.25	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.1	N/A	N/A	2	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	2	1	N/A	N/A	43	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1	1	1	1	N/A	N/A
AMS Engagement Leader		N/A	N/A	1	N/A	N/A	1	1	1	1	1	1	N/A	N/A
SOW 23 - Deployment - MLK	**ALL**													
Engagement Management		2	2	2	2	2	2	2	3	2	2	2	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	2	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	2	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	0.25	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	1	0.25	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.1	N/A	N/A	2	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	2	1	N/A	N/A	43	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1	1	1	1	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
AMS Engagement Leader		N/A	N/A	1	N/A	N/A	1	1	1	1	1	1	N/A	N/A
SOW 23 - Deployment - LAC/USC	**ALL**													
Engagement Management		2	2	2	2	2	2	2	3	2	2	2	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	2	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	2	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.25	N/A	N/A	2	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	5	3	N/A	N/A	43	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1	1	1	1	N/A	N/A
AMS Engagement Leader		N/A	N/A	1	N/A	N/A	1	1	Part-time	1	1	1	N/A	N/A
SOW 23 - Deployment - High Desert	**ALL**													
Engagement Management		2	2	2	2	2	2	2	1	2	2	2	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	1	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	1	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	.5 remote	N/A	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.25	N/A	N/A	.5 remote	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	5	2	N/A	N/A	10	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1	1	1	1	N/A	N/A
AMS Engagement Leader		N/A	N/A	1	N/A	N/A	1	1	1	1	1	1	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 23 - Deployment - Rancho Los Amigos National Rehab Center	**ALL**													
Engagement Management		2	2	2	2	2	2	2	1	2	2	2	2	2
Integration Architect		1	1	1	1	1	1	1	2	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	2	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	1 remote	N/A	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.25	N/A	N/A	1	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	5	2	N/A	N/A	22	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1 remote	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1 remote	1	1	1	N/A	N/A
AMS Engagement leader		N/A	N/A	1	N/A	N/A	1	1	1 remote	1	1	1	N/A	N/A
SOW 23 - Deployment - Olive View	**ALL**													
Engagement Management		2	2	2	2	2	2	2	1	2	2	2	N/A	N/A
Integration Architect		1	1	1	1	1	1	1	2	1	1	1	N/A	N/A
Clinical Strategist		1	N/A	1	1	1	N/A	N/A	1	1	1	1	N/A	N/A
Healthcare Executive		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Learning Consultant		N/A	N/A	0.5	N/A	N/A	N/A	N/A	0.5	N/A	N/A	N/A	N/A	N/A
Technical Engagement Leader		0.25	N/A	0.25	0.25	0.25	N/A	N/A	1 remote	N/A	N/A	N/A	N/A	N/A
Interface Architect/System Engineer		N/A	N/A	N/A	0.25	0.25	N/A	N/A	1	0.25	N/A	N/A	N/A	N/A
Solution Architect/ Delivery Consultant		2	N/A	N/A	5	2	N/A	N/A	24	5	N/A	N/A	N/A	N/A
Hosting Services Engagement Leader		1	N/A	1	1	1	1	1	1 remote	1	1	1	N/A	N/A
Hosting Services System Engineer		1	N/A	N/A	1	1	1	N/A	1 remote	1	1	1	N/A	N/A
AMS Engagement Leader		N/A	N/A	1	N/A	N/A	1	1	1 remote	1	1	1	N/A	N/A

	Solution Correlation	Task 1 FTE	Task 2 FTE	Task 3 FTE	Task 4 FTE	Task 5 FTE	Task 6 FTE	Task 7 FTE	Task 8	Task 9	Task 10	Task 11	Task 12	Task 13
SOW 24 - Support Services and Maintenance Ops	**AMS/CernerWorks**													
Service Delivery Manager		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Production Owner		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Engagement Leader		1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Engagement Controller		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Integration Architect		1	1	1	1	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Solution Architect		5	5	5	1	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Delivery Consultant		15	15	15	5	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AMS Solution Analyst		1	1	1	2	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Assumptions

From a Resource Management Perspective, Project Manager, Project Director, Integration Architect, and Clinical Strategist are accounted for in SOWs 1 and 2. In case of overlapping tasks between SOWs 1 and 2, it is assumed that one full time PM, PD, IA, and CS will suffice.
The numbers in the cells indicate the time commitment of Contractor resources in terms of Full Time Equivalents (FTEs). As an example, "1" indicates that one full resource will be dedicated for the duration of the Task, "0.5" indicates that one resource will be dedicated 50% of their time to the task, "5" means that five resources will be full time dedicated to the task.
Unless otherwise indicated, resources are dedicated for the time commitment indicated.

"See SOW X" indicates that resources may be engaged in more than one of the SOWs (4-20), and the total FTE will only be referenced on one of the SOWs.
SOWs 21-24 in the Solution Architect/Delivery Consultant and Interface Architect/System Engineer roles are a summation of all solution FTEs for each Task outlined.

Some Tasks within in the SOWs span across multiple weeks. FTEs noted should be interrupted as weekly FTEs.

Exhibit A.25.3 (Error Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete the Error Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.4 (Project Communications Strategy)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete the Project Communications Strategy within the time period set forth in the Project Work Plan]

Exhibit A.25.5 (Risk Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete Risk Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.6 (Configuration and Technology Change Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete the Configuration and Technology Change Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.7 (Issue Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete the Issue Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.8 (Project Change Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete Project Change Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.9 (Quality Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete Quality Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.10 (Deliverables Management Plan)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete Deliverables Management Plan within the time period set forth in the Project Work Plan]

Exhibit A.25.11 (Procedures for Status Meetings/Reporting)

to the

Electronic Health Records System and Services Agreement

[Contractor to complete Procedures for Status Meetings/Reporting within the time period set forth in the Project Work Plan]

Exhibit A.26 (Licensed Software Requirements)

to the

Electronic Health Records System and Services Agreement

EXHIBIT A.26

LICENSED SOFTWARE REQUIREMENTS

The following documents submitted by Contractor in response to County's RFP are attached to this Exhibit A.26 (Licensed Software Requirements) and are hereby incorporated by reference:

1 Appendix H(Functional Requirements) and Appendix I (Technical Requirements) of Appendix U (Detailed RFP Requirements Response Form)

2 Appendix H-1 (Functional Requirements Attachment)

3 Appendix I-1 (Technical Requirements Attachment)

1. **Managed Care Requirements**. The managed care requirements option described in Section 2.1.20 (Managed Care Requirements (Optional)) of Appendix H (Functional Requirements) was not selected by County.

2. **Anesthesiology Requirements**. The anesthesiology requirements option described in Section 2.1.21 (Anesthesiology Requirements (Optional)) of Appendix H (Functional Requirements) was selected by County and is a part of the Licensed Software.

ELECTRONIC HEALTH RECORDS SYSTEM (EHR SYSTEM)

REQUEST FOR PROPOSALS

APPENDIX U

(DETAILED RFP REQUIREMENTS PROPOSAL RESPONSE FORM)

November 15, 2011

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Proposer must provide responses to the Detailed RFP Requirements seen in Section 6 (Detailed RFP Requirements Proposal) of the RFP by submitting a signed, completed version of this Appendix U (Detailed RFP Requirements Proposal Response Form) as well as providing several required documents and forms (e.g., Transmittal Letter, Proposer's Organization Questionnaire/Affidavit) that are included as Appendices to this RFP.

As noted in Section 6 (Detailed RFP Requirements Proposal) of the RFP, Proposer's response for each requirement must be limited to the space provided in this Appendix U (Detailed RFP Requirements Proposal Response Form) and must be entered using Calibri font style, 11 point font size.

Proposer's response must be limited to the space provided below for each requirement.

1. EXECUTIVE SUMMARY

Provide Proposer's Executive Summary, pursuant to Section 6.5 (Executive Summary) of the RFP. Proposer's response for this Section is limited to 3 pages.

*Provide a summary of the Proposer's understanding of the requested EHR System;

LAC DHS is seeking to make real improvements in population health, the patient's experience of care, and the cost of care through this procurement of an integrated EHR across your ambulatory and in patient healthcare delivery network.

*Discuss the Proposer's specific role and relevant qualifications for performing that role;

Cerner offers clients a dedicated exclusive focus on healthcare, an end-to-end solution and service portfolio, including comprehensive software solutions, full implementation services provided by Cerner's own team of professionals, Application Management Services (AMS) support services, and best in KLAS Remote Hosting Services (RHO).

*Provide a brief description of the Proposer's history, number of years the organization has been in business, and type of products and services it provides;

Since 1979, Cerner has focused exclusively on designing and deploying healthcare IT solutions that improve efficiency and quality of care. Our revolutionary person-centric Cerner Millennium architecture is designed to fundamentally transform healthcare delivery. Cerner solutions combine technology with knowledge to deliver vital data for effective, real-time decision-making across the enterprise. Healthcare has been our only focus from our inception—and our proven vision and results are a testament to our commitment to eliminate error, variance, waste, delay and friction for more efficient business management which optimizes clinical and financial outcomes. Around the world, health organizations ranging from single-doctor practices to entire countries turn to Cerner for our powerful yet intuitive solutions.

*Summarize the key qualifications of Proposer, distinguishing characteristics of the Proposal, the proposed solution, and Project approach, as well as the principal advantages to County;

•Comprehensive Software Solution: Cerner offers an unrivaled breadth and depth of solutions, spanning diverse healthcare venues such as ambulatory clinics and acute care hospitals. The majority of these solutions have been organically grown to ensure tight integration on a single, unified database. Our commitment in client partnerships is to develop industry standard protocols

and evidenced based content which contribute towards continued advancement to clinical excellence.

•Quality: Clients like LA County find assurance in the fact that Cerner is investing over $1 billion in the next five years in Research & Development, an investment that directly correlates to the improvements and new developments in the solutions we offer. As an organization we are continually innovating to find ways to improve clinical, operational and financial outcomes for our clients - enhancing and promoting their ability to provide excellent care. Largely this focus is based on reducing non-value labor to improve patient centric care and quality outcomes. We realize our clients are in the Healthcare business not the IT or reporting business. Only Cerner has developed a platform that allows for fully digitized hospitals; beds, monitors, pumps and patient access modules, all connected to the EMR on a Cerner developed device connectivity platform reducing nurse data entry by up to 90%. Cerner is also unique in its focus on meeting our clients' needs around quality measures submission requirements. Without third party solutions, Cerner offers real time dashboards to track Core Measures required for Meaningful Use and beyond as a bi-product of care versus retrospective reporting requiring manual abstraction and analysis. Additionally, all current clients receive a Sepsis intervention algorithm imbedded within our software to help prevent incidence of Sepsis within their patient populations by proactively identifying the early signs of Sepsis giving our clients the capability to proactively manage patient outcomes and quality. Dr. John Hensing, CIO of Banner Health, best summarizes the benefit Cerner brings: "The system tackled the deadly problem of sepsis two years ago by starting to flag at-risk patients through its electronic health-record system. An early alert system was created to identify patients most likely to develop the serious bloodstream infection. As a result, Banner Health has seen a substantial improvement. Out of all identified patients at risk of sepsis, 92% leave the hospital alive. "It's a combination of having clinicians respond promptly, creating a protocol of early intervention and using EHR technology to reduce overall mortality and improve outcomes."

In January of 2012, Thomson Reuters released its list of the Top 15 Health Systems in the United States. The top systems were determined by strict performance, outcomes and safety criteria. Six of the nation's top 15 health systems are Cerner clients, more than any other EHR supplier. But this honor rightfully belongs to our clients, and we will continue to innovate and deliver solutions as a clinical partner capable of helping our clients accomplish their goals.

Cerner has a high interest in partnering with organizations such as Los Angeles County DHS, and count as our partners similar county healthcare facilities in southern California, such as the Los Angeles County Sheriff and Probation Departments, the County of Orange Health Care Agency, Ventura County, Tri-City Medical Center and Palomar Pomerado Health System. Additionally, we have key partnerships and provide solutions to numerous other county agencies across the country, and the Department of Defense and the Veterans Association.

•Seamless Integration between Your Clinics and In-Patient Hospitals: LAC DHS requires a clinical information system that will span the needs of your diverse enterprise. The architecture must connect patients with care teams and care teams with one another, allowing seamless information sharing throughout the organization, whether in inpatient or ambulatory venues. Only Cerner offers a comprehensive, person-centric approach to align all aspects of the physician community and a proven "Medical Home" approach emphasizing continuity of care, collective responsibility, communication, disease management in the office and access to information, quality and safety. Because of our unwavering focus on this industry, we know the culture, the language, the nuances of healthcare, and we know how to make all the components work together. In fact, virtually all our installations include non-Cerner software should LAC DHS decide to maintain areas of current

investment.

•Information Exchange With Other Healthcare Providers in LA Area: The Cerner Network is an industry leading suite of connectivity solutions and services that makes electronic data exchange simple, fast and affordable which:

Allows providers to electronically share clinical information with one another

Makes it easier to stay in touch with your patients

Helps providers qualify for federal incentives

Supports health information exchange and improves patient care at a health system, community, state or federal level

Through Cerner's unique ability to connect both Cerner systems and foreign EMR's and well as our numerous established EMR's in the LA County area, such as CHLA, USC, Orange County, Ventura County, and Adventist, we believe that Cerner is best positioned to assist LA County in implementing the same award winning, data driven Health Information Exchange Network to meet its future needs.

•Proven Speed to Value and Efficiency: We understand that a smarter approach to implementation is required in order for a healthcare organization to remain fiscally sound in today's environment. With this reality in mind, we have created the Cerner Solutions Center, a comprehensive, best practices approach to implementing systems from start to finish. Our standardized event-based implementation approach draws upon more than 30 years of proven content from real clients to reduce project variance, increase efficiency and optimize resource use for greater implementation discipline and predictability, The Solution Center approach will allow you to realize benefits at an accelerated pace while minimizing the resources required to perform one-time build activities. With this methodology, Cerner, certified as a Complete EMR by the Certification Commission for Health Information Technology (CCHIT®), is committed to enabling your achievement of "meaningful use" standards in an optimal timeframe, allowing your organization to benefit from the American Recovery and Reinvestment Act's (ARRA) designation of Medicare and Medicaid payments.

•Cerner's Remote Hosting Managed Service Offering (RHO): represents a Best in KLAS offering 3 consecutive years running, 2009 – 2011. Through remote hosting Cerner clients are able to address the growing challenges a healthcare organization is faced in the IT realm, including: hiring and retaining skilled IT professionals, flat-lining capital expenditures relating to IT, managing and maintaining a complex computing environment continually requiring change, maintaining system stability and reliability for clinicians and physicians, and finally disaster prevention & recovery. Cerner remote hosting includes hardware and sublicensed software, proactive 24x7 system management, N+1 hardened datacenter usage, telecommunication between Cerner datacenter and client data center, and guaranteed system availability and response times. Primary benefits realized by Cerner remote hosted clients include: risk and price protection, reduction of FTE requirements associated with managing Cerner technology infrastructure, faster return on investment, and cash and capital retention. The preceding information has all been recognized by KLAS with additional positive notations being: highest satisfaction scores, highest scores for system uptime and performance, and the highest renewal rate for any vendor. Key to note is KLAS' acknowledgement that Cerner is the only vendor in which hosting services increased overall satisfaction with software.

•Account Management Services (AMS) provides production support of Millennium Solutions, resulting in improved solution operation and adoption, lower costs, and less disruption of end users enabling your team to focus on their organization's mission and vision. With AMS, an Engagement

Leader (EL) is assigned to proactively ensure service delivery. The EL is responsible for SLA metrics, client satisfaction, assigning resources, and the overall relationship between your hospital and our team. There are support requirements in the hosting exhibits that seem to indicate that DHS is asking for an AMS support model. Because this was not specifically identified however, Cerner has included it as an Optional service and provided pricing in the Optional Pricing Worksheets.

*Address any issue(s) that Proposer envisions to be associated with fulfilling the requirements of the

RFP and cite specific suggestions for avoiding or mitigating these issues.

Cerner does not see risk in ultimately fulfilling all requirements of the RFP. The risk that Cerner would want to note is in the aggressive timeline that is needed to conclude contract negotiations and implement the EHR System at all facilities in order for the County to make the Meaningful Use Attestation dates. Cerner has a proven history of implementing complex systems for large organizations such as LAC DHS both on time and on budget. The risks involved with large system implementations for multi-facility organizations surround keeping the project on schedule and to the originally defined scope. The project resources from all facilities should agree on the overall EHR System design and workflow. There must be good communication and strong team cohesiveness around the vision and mission. It is critical that there be executive leadership involvement in the project for any key decisions that result from differing opinions among representatives from different facilities. The project should be staffed following Cerner's recommendations and it is imperative that clinicians that will participate in the project are back filled in their roles. These same clinicians that will be the project subject matter experts and super users must be involved in training the rest of the end users and actively support the conversion events as project resources. The clinician involvement in the design decisions will lead to a higher rate of end user acceptance and insure the successful adoption of the EHR System.

2. SYSTEM REQUIREMENTS

Provide Proposer's responses to County's system requirements detailed in Appendix H (Functional Requirements), Appendix H-1 (Functional Requirements Attachment), Appendix I (Technical Requirements), Appendix I-1 (Technical Requirements Attachment), Appendix J (Implementation Requirements) and Appendix K (Administrative Requirements), below.

2.1 APPENDIX H (FUNCTIONAL REQUIREMENTS)

2.1.1 CCHIT CRITERIA

Proposer must affirmatively confirm whether or not Proposer's Licensed Software complies with each CCHIT Ambulatory or Inpatient Criteria by noting "Yes" or "No" for each criteria identified below, pursuant to Section 1.1 (CCHIT Criteria) of Appendix H (Functional Requirements). Proposer must also provide any third party certification it has received regarding its proposed EHR System as Attachment H (Third Party Certification).

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 01.01	The system shall create a single patient record for each patient.	☒ Yes ☐ No
Ambulatory	AM 01.02	The system shall associate (store and link) key identifier information (e.g., system ID, medical record number) with each patient record.	☒ Yes ☐ No
Ambulatory	AM 01.03	The system shall provide the ability to store more than one identifier for each patient record.	☒ Yes ☐ No
Ambulatory	AM 01.04	The system shall provide a field which will identify patients as being exempt from reporting functions.	☒ Yes ☐ No
Ambulatory	AM 01.05	The system shall provide the ability to merge patient information from two patient records into a single patient record.	☒ Yes ☐ No
Ambulatory	AM 02.01	The system shall provide the ability to include demographic information in reports.	☒ Yes ☐ No
Ambulatory	AM 02.02	The system shall provide the ability to maintain and make available historic information for demographic data including prior names, addresses, phone numbers and email addresses.	☒ Yes ☐ No
Ambulatory	AM 02.04	The system shall provide the ability to modify demographic information about the patient.	☒ Yes ☐ No
Ambulatory	AM 02.05	The system shall store demographic information in the patient medical record in separate discrete data fields, such that data extraction tools can retrieve these data.	☒ Yes ☐ No
Ambulatory	FN 01.01	The system shall provide the ability to access demographic information such as name, date of birth and gender needed for patient care functions.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	FN 01.02	The system shall capture and maintain demographic information as discrete data elements as part of the patient record.	☒ Yes ☐ No
Ambulatory	FN 02.01	The system shall provide the ability to query for a patient by more than one form of identification.	☒ Yes ☐ No
Ambulatory	FN 03.01	The system shall provide the ability to capture and maintain, as discrete data elements, the identity of all providers associated with a specific patient encounter.	☒ Yes ☐ No
Ambulatory	FN 03.02	The system shall provide the ability to capture and maintain, as discrete data elements, the principal provider responsible for the care of an individual patient.	☒ Yes ☐ No
Ambulatory	FN 04.02	The system shall provide the ability to capture, maintain and display, as discrete data elements, all problems/diagnoses associated with a patient.	☒ Yes ☐ No
Ambulatory	AM 03.03	The system shall provide the ability to maintain the onset date of the problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.04	The system shall provide the ability to maintain the resolution date of the problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.05	The system shall provide the ability to record the chronicity (chronic, acute/self-limiting, etc.) of a problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.06	The system shall provide the ability to record the user ID and date of all updates to the problem/diagnosis list.	☒ Yes ☐ No
Ambulatory	AM 03.07	The system shall provide the ability to associate orders, medications, and notes with one or more problems/diagnoses.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 03.08.01	The system shall provide the ability to associate orders and medications with one or more codified problems/diagnoses.	☒ Yes ☐ No
Ambulatory	AM 03.09	The system shall provide the ability to maintain a coded list of problems/diagnoses.	☒ Yes ☐ No
Ambulatory	FN 04.06	The system shall provide the ability to display different views of the problem / diagnosis list based upon the status of the problem.	☒ Yes ☐ No
Ambulatory	FN 04.01	The system shall provide the ability to capture, maintain and display free text comments associated with the problem / diagnosis.	☒ Yes ☐ No
Ambulatory	AM 04.02	The system shall provide the ability to record the prescribing of medications including the identity of the prescriber.	☒ Yes ☐ No
Ambulatory	AM 04.03	The system shall provide the ability to maintain medication ordering dates.	☒ Yes ☐ No
Ambulatory	AM 04.04	The system shall provide the ability to maintain other dates associated with medications including start, modify, renewal and end dates as applicable.	☒ Yes ☐ No
Ambulatory	AM 04.05	The system shall provide the ability to display medication history for the patient.	☒ Yes ☐ No
Ambulatory	AM 04.06	The system shall provide the ability to capture medications entered by authorized users other than the prescriber.	☒ Yes ☐ No
Ambulatory	AM 04.07	The system shall store medication information in discrete data fields. At a minimum, there must be one field for each of the following: - medication name, form and strength; - dispense quantity; - refills; and - sig.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 04.09	The system shall provide the ability to enter uncoded or free text medications when medications are not on the vendor-provided medication database or information is insufficient to completely identify the medication.	☒ Yes ☐ No
Ambulatory	AM 04.10	The system shall provide the ability to enter or further specify in a discrete field that the patient takes no medications.	☒ Yes ☐ No
Ambulatory	AM 04.11	The system shall provide the ability to record the date of changes made to a patient's medication list and the identity of the user who made the changes.	☒ Yes ☐ No
Ambulatory	FN 06.01	The system shall provide the ability to update and display a patient-specific medication list based on current medication orders or prescriptions.	☒ Yes ☐ No
Ambulatory	FN 06.02	The system shall provide the ability to display a view that includes only current medications.	☒ Yes ☐ No
Ambulatory	FN 06.03	The system shall provide the ability to exclude a medication from the current medication list (e.g. marked inactive, erroneous, completed, discontinued) and document reason for such action.	☒ Yes ☐ No
Ambulatory	FN 06.04	The system shall provide the ability to print a current medication list.	☒ Yes ☐ No
Ambulatory	FN 06.05	The system shall provide the ability to display that the patient takes no medications.	☒ Yes ☐ No
Ambulatory	FN 06.06	The system shall provide the ability to capture and maintain, as discrete data elements, all current medications including over-the-counter and complementary medications such as vitamins, herbs and supplements.	☒ Yes ☐ No
Ambulatory	FN 05.01	The system shall provide the ability to modify or	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		inactivate an item on the allergy and adverse reaction list.	☐ No
Ambulatory	AM 05.03	The system shall provide the ability to display information which has been inactivated or removed from the allergy and adverse reaction list.	☒ Yes ☐ No
Ambulatory	AM 05.04	The system shall provide the ability to specify the type of allergic or adverse reaction in a discrete data field.	☒ Yes ☐ No
Ambulatory	AM 05.05	The system shall provide the ability to capture and maintain, as discrete data, the identity of the user who added, modified, inactivated or removed items from the allergy and adverse reaction list, including attributes of the changed items. The user ID and date/time stamp shall be recorded.	☒ Yes ☐ No
Ambulatory	AM 05.07	The system shall provide the ability for a user to explicitly capture and maintain, as discrete data, that the allergy list was reviewed. The user ID and date/time stamp shall be recorded when the allergies reviewed option is selected.	☒ Yes ☐ No
Ambulatory	AM 05.09	The system shall provide the ability to explicitly indicate in a discrete field that a patient has no known drug allergies or adverse reactions.	☒ Yes ☐ No
Ambulatory	AM 05.12	The system shall provide the ability to display the allergy list, including date of entry.	☒ Yes ☐ No
Ambulatory	AM 05.13	The system shall provide the ability to capture, maintain and display, as discrete data, lists of medications and other agents to which the patient has had an allergic or other adverse reaction.	☒ Yes ☐ No
Ambulatory	AM 06.01	The system shall provide the ability to capture, store, display, and manage patient history.	☒ Yes ☐ No
Ambulatory	AM 06.02	The system shall provide the ability to capture structured data in the patient history.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 06.03	The system shall provide the ability to update a patient history by modifying, adding or removing items from the patient history as appropriate.	☒ Yes ☐ No
Ambulatory	AM 06.04	The system shall provide the ability to capture patient history as both a presence and absence of conditions, i.e., the specification of the absence of a personal or family history of a specific diagnosis, procedure or health risk behavior.	☒ Yes ☐ No
Ambulatory	AM 06.05	The system shall provide the ability to capture history collected from outside sources.	☒ Yes ☐ No
Ambulatory	AM 06.06	The system shall provide the ability to capture patient history in a standard coded form.	☒ Yes ☐ No
Ambulatory	AM 07.01	The system shall provide the ability to create and display a summary list for each patient that includes, at a minimum, the active problem/diagnosis list, current medication list, medication allergies and adverse reactions	☒ Yes ☐ No
Ambulatory	AM 08.01	The system shall provide the ability to create clinical documentation or notes (henceforth "documentation").	☒ Yes ☐ No
Ambulatory	AM 08.02	The system shall provide the ability to display documentation.	☒ Yes ☐ No
Ambulatory	AM 08.03	The system shall provide the ability to save a note in progress prior to finalizing the note.	☒ Yes ☐ No
Ambulatory	AM 08.04	The system shall provide the ability to finalize a note, i.e., change the status of the note from in progress to complete so that any subsequent changes are recorded as such.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 08.05	The system shall provide the ability to record the identity of the user finalizing each note and the date and time of finalization.	☒ Yes ☐ No
Ambulatory	AM 08.06	The system shall provide the ability to cosign a note and record the date and time of signature.	☒ Yes ☐ No
Ambulatory	AM 08.07	The system shall provide the ability to addend and/or correct notes that have been finalized.	☒ Yes ☐ No
Ambulatory	AM 08.08	The system shall provide the ability to identify the full content of a modified note, both the original content and the content resulting after any changes, corrections, clarifications, addenda, etc. to a finalized note.	☒ Yes ☐ No
Ambulatory	AM 08.09	The system shall provide the ability to record and display the identity of the user who addended or corrected a note and the date and time of the change.	☒ Yes ☐ No
Ambulatory	AM 08.10	The system shall provide the ability to enter free text notes.	☒ Yes ☐ No
Ambulatory	AM 08.11	The system shall provide the ability to filter, search or order notes by the provider who finalized the note.	☒ Yes ☐ No
Ambulatory	AM 08.12	The system shall provide the ability to filter, search or order notes by associated diagnosis within a patient record.	☒ Yes ☐ No
Ambulatory	AM 08.13	The system shall provide the ability to capture patient vital signs, including blood pressure, heart rate, respiratory rate, height, and weight, as discrete data.	☒ Yes ☐ No
Ambulatory	AM 08.14	The system shall provide the ability to capture and display temperature, weight and height in both metric and English units	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 08.15	The system shall be capable of indicating to the user when a vital sign measurement falls outside a preset normal range as set by authorized users.	☒ Yes ☐ No
Ambulatory	AM 08.16	The system shall provide the ability to capture other clinical data elements as discrete data.	☒ Yes ☐ No
Ambulatory	AM 08.19	The system shall provide templates for inputting data in a structured format as part of clinical documentation.	☒ Yes ☐ No
Ambulatory	AM 08.20	The system shall provide the ability to customize clinical templates.	☒ Yes ☐ No
Ambulatory	AM 08.21	The system shall be capable of recording comments by the patient or the patient's representative regarding the accuracy or veracity of information in the patient record (henceforth 'patient annotations').	☒ Yes ☐ No
Ambulatory	AM 08.22	The system shall display patient annotations in a manner which distinguishes them from other content in the system.	☒ Yes ☐ No
Ambulatory	AM 08.24	The system shall provide the ability to graph height and weight over time.	☒ Yes ☐ No
Ambulatory	AM 08.25	The system shall provide the ability to calculate and display body mass index (BMI).	☒ Yes ☐ No
Ambulatory	AM 09.01	The system shall provide the ability to capture and store external documents.	☒ Yes ☐ No
Ambulatory	AM 09.03	The system shall provide the ability to save scanned documents as images.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 09.04	The system shall provide the ability to receive, store in the patient's record, and display text-based outside reports.	☒ Yes ☐ No
Ambulatory	AM 09.05.01	The system shall provide the ability to index scanned documents and associate a date and document type to the document.	☒ Yes ☐ No
Ambulatory	AM 09.05.02	The system shall provide the ability to retrieve indexed scanned documents based on document type and date.	☒ Yes ☐ No
Ambulatory	AM 09.06	The system shall provide access to clinical images. They must be accessible from within the patient's chart and labeled and date-time stamped or included in a patient encounter document. These images may be stored within the system or be provided through direct linkage to external sources.	☒ Yes ☐ No
Ambulatory	AM 09.07	The system shall provide the ability to accept, store in the patient's record, and display clinical results received through an interface with an external source.	☒ Yes ☐ No
Ambulatory	FN 14.01	The system shall provide the ability to produce patient instructions and patient educational materials which may reside within the system or be provided through links to external source.	☒ Yes ☐ No
Ambulatory	AM 10.03	The system shall have the ability to provide access to patient-specific test and procedure instructions that can be modified by the physician or health organization; these instructions are to be given to the patient. These instructions may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 10.04	The system shall have the ability to provide access to patient-specific test and procedure instructions that can be modified by the physician or health organization; these instructions are to be given to the filler of the order. These instructions may reside within the system or be provided through links to external sources.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 10.05	The system shall provide the ability to record that patient specific instructions or educational material were provided to the patient.	☒ Yes ☐ No
Ambulatory	AM 10.06	The system shall provide the ability to create patient specific instructions.	☒ Yes ☐ No
Ambulatory	FN 17.01	The system shall provide the ability to access and review medication information (such as patient education material or drug monograph). This may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 11.01	The system shall provide the ability to create prescription or other medication orders with sufficient information for correct filling and dispensing by a pharmacy.	☒ Yes ☐ No
Ambulatory	AM 11.02	The system shall provide the ability to record user and date stamp for prescription related events, such as initial creation, renewal, refills, discontinuation, and cancellation of a prescription.	☒ Yes ☐ No
Ambulatory	AM 11.03	The system shall provide the ability to capture the identity of the prescribing provider for all medication orders.	☒ Yes ☐ No
Ambulatory	AM 11.04	The system shall provide the ability to capture common content for prescription details including strength, sig, quantity, and refills to be selected by the ordering clinician.	☒ Yes ☐ No
Ambulatory	AM 11.05	The system shall provide the ability to receive and display information received through electronic prescription eligibility checking.	☒ Yes ☐ No
Ambulatory	AM 11.07	The system shall provide the ability to reorder a prior prescription without re-entering previous data (e.g. administration schedule, quantity).	☒ Yes ☐ No
Ambulatory	AM 11.08	The system shall provide the ability to print and electronically fax prescriptions.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 11.09	The system shall provide the ability to re-print and re-fax prescriptions.	☒ Yes ☐ No
Ambulatory	AM 11.11	The system shall provide the ability to display a dose calculator for patient-specific dosing based on weight.	☒ Yes ☐ No
Ambulatory	AM 11.12	The system shall provide the ability to identify medication samples dispensed, including lot number and expiration date.	☒ Yes ☐ No
Ambulatory	AM 11.13	The system shall provide the ability to prescribe fractional amounts of medication (e.g. 1/2 tsp, 1/2 tablet).	☒ Yes ☐ No
Ambulatory	AM 11.14	The system shall provide the ability to alert the user if the drug interaction information is outdated.	☒ Yes ☐ No
Ambulatory	AM 11.15	The system shall provide the ability to allow the user to configure prescriptions to incorporate fixed text according to the user's specifications.	☒ Yes ☐ No
Ambulatory	FN 09.04	The system shall provide the ability to capture and maintain, as discrete data, a diagnosis/problem code or description associated with an order of any type (including prescriptions and medications ordered for administration).	☒ Yes ☐ No
Ambulatory	AM 11.17	The system shall provide the ability to display the associated problem or diagnosis (indication) on the printed prescription.	☒ Yes ☐ No
Ambulatory	AM 11.19	The system shall provide the ability to create provider specific medication lists of the most commonly prescribed drugs with a default route, dose, frequency, and quantity.	☒ Yes ☐ No
Ambulatory	AM 11.20	The system shall provide the ability to add reminders for necessary follow up tests based on	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		medication prescribed.	☐ No
Ambulatory	FN 07.01	The system shall provide the ability to alert the user at the time a new medication is prescribed/ordered that drug interaction, allergy, and formulary checking will not be performed against the uncoded medication or free text medication.	☒ Yes ☐ No
Ambulatory	FN 07.02	The system shall provide the ability to prescribe/order uncoded and non-formulary medications.	☒ Yes ☐ No
Ambulatory	FN 07.03	The system shall provide the ability to maintain a coded list of medications including a unique identifier for each medication.	☒ Yes ☐ No
Ambulatory	FN 07.04	The system shall provide end-users the ability to search for medications by generic or brand name.	☒ Yes ☐ No
Ambulatory	FN 07.05	The system shall provide the ability to access reference information for prescribing/ordering.	☒ Yes ☐ No
Ambulatory	AM 12.01	The system shall provide the ability to order diagnostic tests, including labs and imaging studies.	☒ Yes ☐ No
Ambulatory	AM 12.02	The system shall provide the ability to capture the identity of the ordering provider for all test orders.	☒ Yes ☐ No
Ambulatory	AM 12.03	The system shall provide the ability to capture appropriate order entry detail, including associated diagnosis.	☒ Yes ☐ No
Ambulatory	AM 12.04	The system shall provide the ability to display user created instructions and/or prompts when ordering diagnostic tests or procedures.	☒ Yes ☐ No
Ambulatory	AM 12.05	The system shall provide the ability to relay orders for a diagnostic test to the correct destination for	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		completion.	☐ No
Ambulatory	AM 12.06	The system shall have the ability to provide a view of active orders for an individual patient.	☒ Yes ☐ No
Ambulatory	AM 12.07	The system shall have the ability to provide a view of orders by like or comparable type, e.g., all radiology or all lab orders.	☒ Yes ☐ No
Ambulatory	AM 12.08	The system shall provide the ability to display outstanding orders for multiple patients (as opposed to outstanding orders for a single patient).	☒ Yes ☐ No
Ambulatory	FN 09.01	The system shall provide the ability to require problem / diagnosis as an order component.	☒ Yes ☐ No
Ambulatory	FN 09.02	The system shall provide the ability to view status information for ordered services.	☒ Yes ☐ No
Ambulatory	FN 10.01	The system shall provide the ability to define a set of items to be ordered as a group.	☒ Yes ☐ No
Ambulatory	FN 10.02	The system shall provide the ability to modify order sets.	☒ Yes ☐ No
Ambulatory	FN 10.03	The system shall provide the ability to include in an order set order types including but not limited to medications, laboratory tests, imaging studies, procedures and referrals.	☒ Yes ☐ No
Ambulatory	FN 11.01	The system shall provide the ability for individual orders in an order set to be selected or deselected by the user.	☒ Yes ☐ No
Ambulatory	FN 11.04	The system shall provide the ability to display orders placed through an order set either individually or as a group.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 14.01	The system shall provide the ability to indicate normal and abnormal results based on data provided from the original data source.	☒ Yes ☐ No
Ambulatory	AM 14.02	The system shall provide the ability to display numerical results in flow sheets and graphical form in order to compare results, and shall provide the ability to display values graphed over time.	☒ Yes ☐ No
Ambulatory	AM 14.03	The system shall provide the ability to display non-numeric current and historical test results as textual data.	☒ Yes ☐ No
Ambulatory	AM 14.04	The system shall provide the ability to notify the relevant providers (ordering, copy to) that new results have been received.	☒ Yes ☐ No
Ambulatory	AM 14.05	The system shall provide the ability to filter or sort results by type of test and test date.	☒ Yes ☐ No
Ambulatory	AM 14.07	The system shall provide the ability to forward a result to other users.	☒ Yes ☐ No
Ambulatory	AM 14.08	The system shall provide the ability to link the results to the original order.	☒ Yes ☐ No
Ambulatory	AM 14.09	The system shall provide the ability for a user to attach a free text comment to a result that can be seen by another user who might subsequently view that result.	☒ Yes ☐ No
Ambulatory	AM 14.10	The system shall provide the ability to associate one or more images with a non-numerical result.	☒ Yes ☐ No
Ambulatory	AM 14.11	The system shall provide the ability for a user to whom a result is presented to acknowledge the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		result.	☐ No
Ambulatory	AM 15.01	The system shall provide the ability to capture scanned paper consent documents (covered in DC.1.1.3.1).	☒ Yes ☐ No
Ambulatory	AM 15.02	The system shall provide the ability to store, display and print patient consent forms.	☒ Yes ☐ No
Ambulatory	AM 15.04	The system shall provide the ability to store and display administrative documents (e.g. privacy notices).	☒ Yes ☐ No
Ambulatory	AM 15.05	The system shall provide the ability to chronologically display consents and authorizations.	☒ Yes ☐ No
Ambulatory	AM 16.01	The system shall provide the ability to indicate that a patient has completed advance directive(s).	☒ Yes ☐ No
Ambulatory	AM 16.02	The system shall provide the ability to indicate the type of advance directives, such as living will, durable power of attorney, or a "Do Not Resuscitate" order.	☒ Yes ☐ No
Ambulatory	AM 16.03	The system shall provide the ability to indicate when advance directives were last reviewed.	☒ Yes ☐ No
Ambulatory	AM 17.01	The system shall have the ability to provide access to standard care plan, protocol and guideline documents when requested at the time of the clinical encounter. These documents may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 17.02	The system shall provide the ability to create site-specific care plan, protocol, and guideline documents.	☒ Yes ☐ No
Ambulatory	AM 17.03	The system shall provide the ability to modify site-	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		specific standard care plan, protocol, and guideline documents obtained from outside sources.	☐ No
Ambulatory	FN 12.10	The system shall provide the ability to check for potential interactions between medications to be prescribed and medication allergies and intolerances listed in the record and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Ambulatory	AM 19.05	The system shall provide the ability to set the severity level at which drug interaction warnings should be displayed.	☒ Yes ☐ No
Ambulatory	FN 12.04	The system shall provide the ability to display, on demand, potential drug-allergy interactions, drug-drug interactions and drug-diagnosis interactions based on current medications, active allergies and active problems.	☒ Yes ☐ No
Ambulatory	FN 13.01	The system shall provide drug-diagnosis interaction alerts at the time of medication prescribing/ordering.	☒ Yes ☐ No
Ambulatory	FN 12.11	The system shall provide the ability, when a new allergy is documented, to check for a potential interaction between the newly-documented allergy and the patient's current medications, and alert the user if such interactions exist.	☒ Yes ☐ No
Ambulatory	FN 12.01	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and current medications and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Ambulatory	FN 12.05	The system shall provide the ability to view the rationale for a drug interaction alert.	☒ Yes ☐ No
Ambulatory	FN 12.06	The system shall provide the ability to capture and maintain at least one reason for overriding any drug-drug or drug-allergy/intolerance interaction warning triggered at the time of medication	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		prescribing/ordering.	
Ambulatory	FN 12.07	The system shall provide the ability to enter a structured response when overriding a drug-drug or drug-allergy/intolerance warning.	☒ Yes ☐ No
Ambulatory	FN 12.08	The system shall provide the ability to prescribe/order a medication despite alerts for interactions and/or allergies/intolerances being present.	☒ Yes ☐ No
Ambulatory	FN 12.09	The system shall provide the ability to accept updates to drug interaction databases	☒ Yes ☐ No
Ambulatory	FN 15.01	The system shall provide the ability to capture medication administration details as discrete data, including: (1) the medication name and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Ambulatory	FN 16.02	The system shall provide the ability to capture, in a discrete field, an allergy/adverse reaction to a specific immunization.	☒ Yes ☐ No
Ambulatory	FN 16.03	The system shall provide the ability to capture immunization administration details as discrete data, including: (1) the immunization type and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Ambulatory	AM 21.01	The system shall provide the ability to create referral orders with detail adequate for correct routing.	☒ Yes ☐ No
Ambulatory	AM 21.02	The system shall provide the ability to record user ID and date/time stamp for all referral related events.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 22.01	The system shall provide the ability to establish criteria for disease management, wellness, and preventive services based on patient demographic data (minimally age and gender).	☒ Yes ☐ No
Ambulatory	AM 22.02	The system shall provide the ability to display alerts based on established guidelines.	☒ Yes ☐ No
Ambulatory	AM 22.03	The system shall provide the ability to establish criteria for disease management, wellness, and preventive services based on clinical data (problem/diagnosis list, current medications).	☒ Yes ☐ No
Ambulatory	AM 22.04	The system shall provide the ability to update disease management guidelines and any associated reference material.	☒ Yes ☐ No
Ambulatory	AM 22.05	The system shall provide the ability to update preventive services/wellness guidelines and any associated reference material.	☒ Yes ☐ No
Ambulatory	AM 22.06	The system shall provide the ability to override guidelines.	☒ Yes ☐ No
Ambulatory	AM 22.07	The system shall provide the ability to document reasons disease management or preventive services/wellness prompts were overridden.	☒ Yes ☐ No
Ambulatory	AM 22.08	The system shall provide the ability to modify the rules or parameters upon which guideline-related alerts are based.	☒ Yes ☐ No
Ambulatory	AM 22.09	The system shall provide the ability to document that a preventive or disease management service has been performed based on activities documented in the record (e.g., vitals signs taken).	☒ Yes ☐ No
Ambulatory	AM 22.10	The system shall provide the ability to document that a disease management or preventive service has been performed with associated dates or other relevant details recorded.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 21.11	The system shall provide the ability to individualize alerts to address a patient's specific clinical situation.	☒ Yes ☐ No
Ambulatory	AM 23.01	The system shall provide the ability to identify preventive services, tests or counseling that are due on an individual patient.	☒ Yes ☐ No
Ambulatory	AM 23.02	The system shall provide the ability to display reminders for disease management, preventive and wellness services in the patient record.	☒ Yes ☐ No
Ambulatory	AM 23.03	The system shall provide the ability to identify criteria for disease management, preventive and wellness services based on patient demographic data (age, gender).	☒ Yes ☐ No
Ambulatory	AM 23.04	The system shall provide the ability to identify criteria for disease management, preventive, and wellness services based on clinical data (problem/diagnosis list, current medications, lab values).	☒ Yes ☐ No
Ambulatory	AM 23.05	The system shall provide the ability to modify the guidelines, criteria or rules that trigger the reminders.	☒ Yes ☐ No
Ambulatory	AM 23.06	The system shall provide the ability to notify the provider that patients are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 23.07	The system shall provide the ability to produce a list of patients who are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 23.09	The system shall provide the ability to automatically generate reminder letters for patients who are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 24.01	The system shall provide the ability to create and assign tasks by user or user role.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 24.02	The system shall provide the ability to present a list of tasks by user or user role.	☒ Yes ☐ No
Ambulatory	AM 24.03	The system shall provide the ability to re-assign and route tasks from one user to another user.	☒ Yes ☐ No
Ambulatory	AM 24.04	The system shall provide the ability to designate a task as completed.	☒ Yes ☐ No
Ambulatory	AM 24.05	The system shall provide the ability to remove a task without completing the task.	☒ Yes ☐ No
Ambulatory	AM 25.01	The system shall provide the ability to document verbal/telephone communication into the patient record.	☒ Yes ☐ No
Ambulatory	AM 25.03	The system shall support messaging between users.	☒ Yes ☐ No
Ambulatory	AM 26.01	The system shall have the ability to provide electronic communication between prescribers and pharmacies or other intended recipients of the medication order.	☒ Yes ☐ No
Ambulatory	AM 27.01	The system shall provide the ability to maintain a directory of all clinical personnel who currently use or access the system.	☒ Yes ☐ No
Ambulatory	AM 27.02	The system shall provide the ability to maintain a directory which contains identifiers required for licensed clinicians to support the practice of medicine including at a minimum state medical license, DEA, and NPI.	☐ Yes ☒ No
Ambulatory	AM 27.03	The system shall allow authorized users to update the directory.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 27.04	The system shall provide the ability to create and maintain a directory of clinical personnel external to the organization who are not users of the system to facilitate communication and information exchange.	☐ Yes ☒ No
Ambulatory	AM 28.01	The system shall provide the ability to display a schedule of patient appointments, populated either through data entry in the system itself or through an external application interoperating with the system.	☒ Yes ☐ No
Ambulatory	AM 29.01	The system shall provide the ability to generate reports of clinical and administrative data using either internal or external reporting tools.	☒ Yes ☐ No
Ambulatory	AM 29.02	The system shall provide the ability to generate reports consisting of all or part of an individual patient's medical record (e.g. patient summary).	☒ Yes ☐ No
Ambulatory	AM 29.03	The system shall provide the ability to generate reports regarding multiple patients (e.g. diabetes roster).	☒ Yes ☐ No
Ambulatory	AM 29.04	The system shall provide the ability to specify report parameters (sort and filter criteria) based on patient demographic and clinical data (e.g., all male patients over 50 that are diabetic and have a HbA1c value of over 7.0 or that are on a certain medication).	☒ Yes ☐ No
Ambulatory	AM 29.05	The system shall provide the ability to access reports outside the EHR application.	☒ Yes ☐ No
Ambulatory	AM 29.06	The system shall provide the ability to produce reports based on the absence of a clinical data element (e.g., a lab test has not been performed or a blood pressure has not been measured in the last year).	☒ Yes ☐ No
Ambulatory	AM 29.07	The system shall provide the ability to save report	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		parameters for generating subsequent reports.	☐ No
Ambulatory	AM 29.08	The system shall provide the ability to modify one or more parameters of a saved report specification when generating a report using that specification.	☒ Yes ☐ No
Ambulatory	AM 30.01	The system shall provide the ability to define one or more reports as the formal health record for disclosure purposes.	☒ Yes ☐ No
Ambulatory	AM 30.02	The system shall provide the ability to generate hardcopy or electronic output of part or all of the individual patient's medical record.	☒ Yes ☐ No
Ambulatory	AM 30.03	The system shall provide the ability to generate hardcopy and electronic output by date and/or date range.	☒ Yes ☐ No
Ambulatory	AM 30.04	The system shall provide the ability to export structured data which removes those identifiers listed in the HIPAA definition of a limited dataset. This export on hardcopy and electronic output shall leave the actual PHI data unmodified in the original record.	☒ Yes ☐ No
Ambulatory	AM 30.05	The system shall provide the ability to create hardcopy and electronic report summary information (procedures, medications, labs, immunizations, allergies, and vital signs).	☒ Yes ☐ No
Ambulatory	AM 30.06	The system shall have the ability to provide support for disclosure management in compliance with HIPAA and applicable law.	☒ Yes ☐ No
Ambulatory	AM 31.02	The system shall provide the ability to document encounters by one or more of the following means: direct keyboard entry of text; structured data entry utilizing templates, forms, pick lists or macro substitution; dictation with subsequent transcription of voice to text, either manually or via voice recognition system.	☒ Yes ☐ No
Ambulatory	AM 31.03	The system shall provide the ability to associate	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		individual encounters with diagnoses.	☐ No
Ambulatory	AM 31.04	The system shall have the ability to provide filtered displays of encounters based on encounter characteristics, including date of service, encounter provider and associated diagnosis.	☒ Yes ☐ No
Ambulatory	AM 33.01	The system shall provide the ability to display medical eligibility obtained from patient's insurance carrier, populated either through data entry in the system itself or through an external application interoperating with the system.	☒ Yes ☐ No
Ambulatory	AM 34.02	The system shall provide the ability to specify the role of each provider associated with a patient, such as encounter provider, primary care provider, attending, resident, or consultant using structured data.	☒ Yes ☐ No
Ambulatory	AM 35.01	The system shall provide the ability to update the clinical content or rules utilized to generate clinical decision support reminders and alerts.	☒ Yes ☐ No
Ambulatory	AM 35.02	The system shall provide the ability to update clinical decision support guidelines and associated reference material.	☒ Yes ☐ No
Ambulatory	FN 18.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for variation from rule-based clinical messages (for example alerts and reminders).	☒ Yes ☐ No
Ambulatory	AM 36.02	The system shall provide a means to document a patient's dispute with information currently in their chart.	☒ Yes ☐ No
Ambulatory	AM 36.04	The system shall provide the ability to identify certain information as confidential and only make that accessible by appropriately authorized users.	☒ Yes ☐ No
Ambulatory	AM 36.05	The system shall provide the ability to prevent specified user(s) from accessing a designated patient's chart.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 36.06	When access to a chart is restricted, the system shall provide a means for appropriately authorized users to "break the glass" for emergency situations.	☒ Yes ☐ No
Ambulatory	AM 37.01	The system shall provide the ability to retain data until otherwise purged, deleted, archived or otherwise deliberately removed.	☒ Yes ☐ No
Ambulatory	AM 39.01	The system shall provide the ability to export (extract) pre-defined set(s) of data out of the system.	☒ Yes ☐ No
Ambulatory	AM 40.01	The system shall provide the ability for multiple users to interact concurrently with the EHR application.	☒ Yes ☐ No
Ambulatory	AM 40.02	The system shall provide the ability for concurrent users to simultaneously view the same record.	☒ Yes ☐ No
Ambulatory	AM 40.03	The system shall provide the ability for concurrent users to view the same clinical documentation or template.	☒ Yes ☐ No
Ambulatory	AM 40.04	The system shall provide protection to maintain the integrity of clinical data during concurrent access.	☒ Yes ☐ No
Ambulatory	IO-AM 07.01	The system shall provide the ability to receive and store general laboratory results using the HL7 v.2.5.1 ORU message standard	☒ Yes ☐ No
Ambulatory	IO-AM 09.06	The system shall provide the ability to send an electronic prescription to pharmacy	☒ Yes ☐ No
Ambulatory	IO-AM 09.09	The system shall provide the ability to respond to a request for a refill sent from a pharmacy	☒ Yes ☐ No
Ambulatory	IO-AM 09.13	The system shall provide the ability to send a query to verify prescription drug insurance	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		eligibility and apply response to formulary and benefit files to determine coverage	☐ No
Ambulatory	IO-AM 09.14	The system shall provide the ability to capture and display formulary information from pharmacy or PBM (Pharmacy Benefits Manager) by applying eligibility response	☒ Yes ☐ No
Ambulatory	IO-AM 09.15	The system shall provide the ability to send a query for medication history to PBM or pharmacy to capture and display medication list from the EHR	☒ Yes ☐ No
Ambulatory	IO-AM 10.10	The system shall provide the ability to display HITSP C32/CCD documents and file them as intact documents in the EHR. Summary patient record content information will include: patient demographics, medication list, medication allergy list.	☒ Yes ☐ No
Ambulatory	IO-AM 10.20	The system shall provide the ability to generate and format patient summary documents per the following specifications: HITSP C32 (v2.3 or v2.5) Summary patient record content information will include: patient demographics, medications, medication allergies Generated xml documents must demonstrate use of industry-standard vocabularies/terminologies. The intent is to test the Required (R) fields, including the product coded terminology for the medication and medication allergy.	☒ Yes ☐ No
Ambulatory	PC 01.11	The system shall provide the ability for a clinical or other authorized user to view the full content of a finalized note. The full content of a finalized note includes the finalized note and any finalized modifications to that note including finalized changes referred to as corrections, clarifications, addenda, etc. Finalizing is the act of publishing into the system in a way that others may access information that has changed.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	PC 04.08	The system shall provide the ability to save a note in progress prior to finalizing the note.	☒ Yes ☐ No
Ambulatory	PC 08.01	The system shall have the ability to record and display the identity and credentials of all users who entered all or part of a note even if they did not finalize the note.	☒ Yes ☐ No
Ambulatory	SC 01.01	The system shall enforce the most restrictive set of rights/privileges or accesses needed by users/groups (e.g. System Administration, Clerical, Nurse, Doctor, etc.), or processes acting on behalf of users, for the performance of specified tasks.	☒ Yes ☐ No
Ambulatory	SC 01.02	The system shall provide the ability for authorized administrators to assign restrictions or privileges to users/groups.	☒ Yes ☐ No
Ambulatory	SC 01.03	The system must be able to associate permissions with a user using one or more of the following access controls: 1) user-based (access rights assigned to each user); 2) role-based (users are grouped and access rights assigned to these groups); or 3) context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	☒ Yes ☐ No
Ambulatory	SC 01.04	The system shall support removal of a user's privileges without deleting the user from the system. The purpose of the criteria is to provide the ability to remove a user's privileges, but maintain a history of the user in the system.	☒ Yes ☐ No
Ambulatory	SC 02.01	The system shall allow an authorized administrator to set the inclusion or exclusion of auditable events in SC 02.03 based on organizational policy & operating requirements/limits.	☒ Yes ☐ No
Ambulatory	SC 02.02	The system shall support logging to a common audit engine using the schema and transports specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA)	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		Profile.	
Ambulatory	SC 02.03	The system shall be able to detect security-relevant events that it mediates and generate audit records for them. At a minimum the events shall include those listed in the Appendix Audited Events. Note: The system is only responsible for auditing security events that it mediates. A mediated event is an event that the system has some active role in allowing or causing to happen or has opportunity to detect. The system is not expected to create audit logs entries for security events that it does not mediate.	☒ Yes ☐ No
Ambulatory	SC 02.04	The system shall record within each audit record the following information when it is available: (1) date and time of the event; (2) the component of the system (e.g. software component, hardware component) where the event occurred; (3) type of event (including: data description and patient identifier when relevant); (4) subject identity (e.g. user identity); and (5) the outcome (success or failure) of the event.	☒ Yes ☐ No
Ambulatory	SC 02.05	The system shall provide authorized administrators with the capability to read all audit information from the audit records in one of the following two ways: 1) The system shall provide the audit records in a manner suitable for the user to interpret the information. The system shall provide the capability to generate reports based on ranges of system date and time that audit records were collected. 2) The system shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. UTC synchronization).	☒ Yes ☐ No
Ambulatory	SC 02.06	The system shall be able to support time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.	☒ Yes ☐ No
Ambulatory	SC 02.07	The system shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. Example: "1994-11-05T13:15:30-05:00" corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	SC 02.08	The system shall prohibit all users read access to the audit records, except those users that have been granted explicit read-access. The system shall protect the stored audit records from unauthorized deletion. The system shall prevent modifications to the audit records.	☒ Yes ☐ No
Ambulatory	SC 03.01	The system shall authenticate the user before any access to Protected Resources (e.g. PHI) is allowed, including when not connected to a network e.g. mobile devices.	☒ Yes ☐ No
Ambulatory	SC 03.02	When passwords are used, the system shall support password strength rules that allow for minimum number of characters, and inclusion of alpha-numeric complexity.	☒ Yes ☐ No
Ambulatory	SC 03.03	The system upon detection of inactivity of an interactive session shall prevent further viewing and access to the system by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout shall be configurable.	☒ Yes ☐ No
Ambulatory	SC 03.04	The system shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The system shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	☒ Yes ☐ No
Ambulatory	SC 03.05	When passwords are used, the system shall provide an administrative function that resets passwords.	☒ Yes ☐ No
Ambulatory	SC 03.06	When passwords are used, user accounts that have been reset by an administrator shall require the user to change the password at next successful logon.	☒ Yes ☐ No
Ambulatory	SC 03.07	The system shall provide only limited feedback	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		information to the user during the authentication.	☐ No
Ambulatory	SC 03.08	The system shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Ambulatory	SC 03.09	When passwords are used, the system shall allow an authenticated user to change their password consistent with password strength rules (SC 03.02).	☒ Yes ☐ No
Ambulatory	SC 03.10	When passwords are used, the system shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Ambulatory	SC 03.11	When passwords are used, the system shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords.	☒ Yes ☐ No
Ambulatory	SC 03.12	When passwords are used, the system shall prevent the reuse of passwords previously used within a specific (configurable) timeframe (i.e., within the last X days, etc. - e.g. "last 180 days"), or shall prevent the reuse of a certain (configurable) number of the most recently used passwords (e.g. "last 5 passwords").	☒ Yes ☐ No
Ambulatory	SC 04.01	The system shall include documentation that describes the patch (hot-fix) handling process the vendor will use for EHR, operating system and underlying tools (e.g. a specific web site for notification of new patches, an approved patch list, special instructions for installation, and post-installation test).	☒ Yes ☐ No
Ambulatory	SC 04.02	The system shall include documentation that explains system error or performance messages to users and administrators, with the actions required.	☒ Yes ☐ No
Ambulatory	SC 04.03	The system shall include documentation of product capacities (e.g. number of users, number of transactions per second, number of records,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		network load, etc.) and the baseline representative configurations assumed for these capacities (e.g. number or type of processors, server/workstation configuration and network capacity, etc).	☐ No
Ambulatory	SC 04.04	The system shall include documented procedures for product installation, start-up and/or connection.	☒ Yes ☐ No
Ambulatory	SC 04.05	The system shall include documentation of the minimal privileges necessary for each service and protocol necessary to provide EHR functionality and/or serviceability.	☒ Yes ☐ No
Ambulatory	SC 04.06	The system shall include documentation available to the customer stating whether or not there are known issues or conflicts with security services in at least the following service areas: antivirus, intrusion detection, malware eradication, host-based firewall and the resolution of that conflict (e.g. most systems should note that full virus scanning should be done outside of peak usage times and should exclude the databases.).	☒ Yes ☐ No
Ambulatory	SC 04.07	If the system includes hardware, the system shall include documentation that covers the expected physical environment necessary for proper secure and reliable operation of the system including: electrical, HVAC, sterilization, and work area.	☒ Yes ☐ No
Ambulatory	SC 04.08	The system shall include documentation that itemizes the services (e.g. PHP, web services) and network protocols/ports (e.g. HL-7, HTTP, FTP) that are necessary for proper operation and servicing of the system, including justification of the need for that service and protocol. This information may be used by the healthcare facility to properly configure their network defenses (firewalls and routers).	☒ Yes ☐ No
Ambulatory	SC 04.09	The system shall include documentation that describes the steps needed to confirm that the system installation was properly completed and that the system is operational.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	SC 04.10	The system shall include documentation available to the customer that provides guidelines for configuration and use of the security controls necessary to support secure and reliable operation of the system, including but not limited to: creation, modification, and deactivation of user accounts, management of roles, reset of passwords, configuration of password constraints, and audit logs.	☒ Yes ☐ No
Ambulatory	SC 05.01	The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software ("malware"). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	☒ Yes ☐ No
Ambulatory	SC 05.02	The system shall be configurable to prevent corruption or loss of data already accepted into the system in the event of a system failure (e.g. integrating with a UPS, etc.).	☒ Yes ☐ No
Ambulatory	SC 06.01	The system shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as TLS, SSL, IPSec, XML encryptions, or S/MIME or their successors.	☒ Yes ☐ No
Ambulatory	SC 06.02	When passwords are used, the system shall not display passwords while being entered.	☒ Yes ☐ No
Ambulatory	SC 06.03	For systems that provide access to PHI through a web browser interface (i.e. HTML over HTTP) shall include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS). Note: Web browser interfaces are often used beyond the perimeter of the protected enterprise network	☒ Yes ☐ No
Ambulatory	SC 06.04	The system shall support protection of integrity of all Protected Health Information (PHI) delivered over the Internet or other known open networks	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		via SHA1 hashing and an open protocol such as TLS, SSL, IPSec, XML digital signature, or S/MIME or their successors.	
Ambulatory	SC 06.05	The system shall support ensuring the authenticity of remote nodes (mutual node authentication) when communicating Protected Health Information (PHI) over the Internet or other known open networks using an open protocol (e.g. TLS, SSL, IPSec, XML sig, S/MIME).	☒ Yes ☐ No
Ambulatory	SC 06.06	The system, when storing PHI on any device intended to be portable/removable (e.g. thumb-drives, CD-ROM, PDA, Notebook), shall support use of a standards based encrypted format using triple-DES (3DES), or the Advanced Encryption Standard (AES), or their successors.	☒ Yes ☐ No
Ambulatory	SC 06.07	The system, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The system should only be accessed by authorized users"). In the event that a system does not support pre-login capabilities, the system shall display the banner immediately following authorization.	☒ Yes ☐ No
Ambulatory	SC 08.01	The system shall be able to generate a backup copy of the application data, security credentials, and log/audit files.	☒ Yes ☐ No
Ambulatory	SC 08.02	The system restore functionality shall result in a fully operational and secure state. This state shall include the restoration of the application data, security credentials, and log/audit files to their previous state.	☒ Yes ☐ No
Ambulatory	SC 08.03	If the system claims to be available 24x7 then the system shall have ability to run a backup concurrently with the operation of the application.	☒ Yes ☐ No
Inpatient	IP 01.01	The system shall provide the ability to display bed assignment information including temporary bed assignment.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 01.02	The system shall provide the ability to identify the current physical location of any patient during their stay, to include the date and time the patient entered their current location.	☒ Yes ☐ No
Inpatient	IP 01.03	The system shall provide the ability to identify a patient record as restricted or no release of information.	☒ Yes ☐ No
Inpatient	FN 01.01	The system shall provide the ability to access demographic information such as name, date of birth and gender needed for patient care functions.	☒ Yes ☐ No
Inpatient	FN 01.02	The system shall capture and maintain demographic information as discrete data elements as part of the patient record.	☒ Yes ☐ No
Inpatient	FN 02.01	The system shall provide the ability to query for a patient by more than one form of identification.	☒ Yes ☐ No
Inpatient	IP 02.01	The system shall provide the ability to uniquely identify clinicians for the provision of care.	☒ Yes ☐ No
Inpatient	IP 02.02	The system shall provide the ability to assign clinicians to appropriate teams, where teams are defined as groups of clinicians who share responsibility for covering the same group of patients.	☒ Yes ☐ No
Inpatient	IP 02.04	The system shall provide the ability to specify the Admitting Physician.	☒ Yes ☐ No
Inpatient	IP 02.05	The system shall provide the ability to maintain a directory which identifies the physician by multiple unique identifiers.	☒ Yes ☐ No
Inpatient	FN 03.01	The system shall provide the ability to capture and maintain, as discrete data elements, the identity of all providers associated with a specific patient encounter.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 03.02	The system shall provide the ability to capture and maintain, as discrete data elements, the principal provider responsible for the care of an individual patient.	☒ Yes ☐ No
Inpatient	IP 03.01	The system shall provide for the ability to identify patients by status e.g. active, admitted patients or inactive, discharged patients.	☒ Yes ☐ No
Inpatient	FN 04.06	The system shall provide the ability to display different views of the problem / diagnosis list based upon the status of the problem.	☒ Yes ☐ No
Inpatient	IP 04.02	The system shall provide the ability to display the history of changes made to a specific problem / diagnosis, including clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 04.03	The system shall provide the ability to configure problem list documentation to allow the entry of free text problems and to display an alert of the implications of entering the free text (e.g. free text won't trigger decision support)	☒ Yes ☐ No
Inpatient	IP 04.05	When the display of the problem list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 04.06	The system shall provide the ability to modify documentation entered in error, maintaining a record of the original entry, identification of the clinician correcting the error and the date and time corrected.	☒ Yes ☐ No
Inpatient	IP 04.09	The system shall provide the ability to maintain a coded list of problems.	☒ Yes ☐ No
Inpatient	IP 04.11	The system shall provide the ability to search all patient records and identify individual patients with specific problems / diagnoses.	☒ Yes ☐ No
Inpatient	FN 04.01	The system shall provide the ability to capture, maintain and display free text comments associated with the problem / diagnosis.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Inpatient	FN 04.02	The system shall provide the ability to capture, maintain and display, as discrete data elements, all problems associated with a patient.	☒ Yes ☐ No
Inpatient	FN 04.04	The system shall provide the ability to print a problem/diagnosis list.	☒ Yes ☐ No
Inpatient	FN 04.05	The system shall provide the ability to capture and maintain, as discrete data elements, the specific problem / diagnosis, user, date and time of all updates to the problem list.	☒ Yes ☐ No
Inpatient	FN 05.10	The system shall provide the ability to capture the source of the allergy information.	☒ Yes ☐ No
Inpatient	IP 05.02	The system shall provide the ability to capture the severity of an allergic or adverse reaction.	☒ Yes ☐ No
Inpatient	IP 05.03	The system shall provide the ability to record that the allergies are “Unknown” or “Unable to Assess Allergies.”	☒ Yes ☐ No
Inpatient	IP 05.04	The system shall provide the ability to require the documentation of patient allergies (inclusive of using such terms as Unknown or Unable to Assess) before completion of the medication order.	☒ Yes ☐ No
Inpatient	IP 05.05	When allergies are “Unknown” or “Unable to Assess Allergies,” the system shall provide the ability to require a reason to be documented.	☒ Yes ☐ No
Inpatient	IP 05.06	When allergies are “Unknown” or “Unable to Assess Allergies,” the system shall provide the ability to inform the clinician for the need of an update.	☒ Yes ☐ No
Inpatient	FN 05.12	The system shall provide the ability to display the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		allergy list, including date of entry.	☐ No
Inpatient	IP 05.08	When the display of the allergy list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 05.09	The system shall provide the ability to print the allergy list.	☒ Yes ☐ No
Inpatient	IP 05.10	The system shall provide the ability to change / add allergies directly from the allergy list and during medication ordering.	☒ Yes ☐ No
Inpatient	IP 05.11	The system shall provide the configurable ability to enter free text allergies and display them in a manner that distinguishes them from coded allergy entries.	☒ Yes ☐ No
Inpatient	IP 05.12	The system shall provide the ability to indicate that interaction checking will not occur against free text allergies.	☒ Yes ☐ No
Inpatient	IP 05.13	The system shall provide a mechanism to correct erroneous allergy documentation, displaying it as erroneous with the identification of the clinician correcting the allergy and the date and time of the correction.	☒ Yes ☐ No
Inpatient	FN 05.01	The system shall provide the ability to modify or inactivate an item on the allergy and adverse reaction list.	☒ Yes ☐ No
Inpatient	FN 05.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for inactivating or revising an item from the allergy and adverse reaction list.	☒ Yes ☐ No
Inpatient	FN 05.04	The system shall provide the ability to specify the type of allergic or adverse reaction in a discrete data field.	☒ Yes ☐ No
Inpatient	FN 05.05	The system shall provide the ability to capture and maintain, as discrete data, the identity of the user	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		who added, modified, inactivated or removed items from the allergy and adverse reaction list, including attributes of the changed items. The user ID and date/time stamp shall be recorded.	☐ No
Inpatient	FN 05.07	The system shall provide the ability for a user to explicitly capture and maintain, as discrete data, that the allergy list was reviewed. The user ID and date/time stamp shall be recorded when the allergies reviewed option is selected.	☒ Yes ☐ No
Inpatient	FN 05.09	The system shall provide the ability to explicitly indicate in a discrete field that a patient has no known drug allergies or adverse reactions.	☒ Yes ☐ No
Inpatient	FN 05.13	The system shall provide the ability to capture, maintain and display, as discrete data, lists of medications and other agents to which the patient has had an allergic or other adverse reaction.	☒ Yes ☐ No
Inpatient	IP 06.01	When the display of the medication list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 06.02	The system shall provide the ability to display the name of the ordering clinician, medication order (name, dose, route, and frequency), a start date and time, and an end date and time or duration for entries on the medication list.	☒ Yes ☐ No
Inpatient	IP 06.03	The system shall provide the ability to display on the medication list active medications that the patient brings from home to take while hospitalized, which the Pharmacy may not dispense.	☒ Yes ☐ No
Inpatient	IP 06.04	The system shall provide the ability to update the medication list with new medication orders, start date and time, end date and time or duration and pharmacy verification status.	☒ Yes ☐ No
Inpatient	FN 06.01	The system shall provide the ability to update and display a patient-specific medication list based on current medication orders or prescriptions.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 06.05	The system shall provide the ability to update the medication list with changes from pharmacist verification including pharmacist, date, and time.	☒ Yes ☐ No
Inpatient	IP 06.06	The system shall provide the ability to indicate the reason/ indication for the medication during order entry.	☒ Yes ☐ No
Inpatient	IP 06.07	The system shall provide the ability to record the reason or indication for the medication when recording historical or home medications.	☒ Yes ☐ No
Inpatient	IP 06.08	The system shall provide the ability to change / order medication directly from the medication list and that the same clinical decision support, alerts and interaction checking occurring during order entry also occur.	☒ Yes ☐ No
Inpatient	IP 06.09	The system shall provide the ability to change / order medication directly from med reconciliation.	☒ Yes ☐ No
Inpatient	IP 06.11	The system shall provide the ability to sort and filter the medication list.	☒ Yes ☐ No
Inpatient	IP 06.12	The system shall provide the configurable ability to enter free text medications and display them in a manner that distinguishes them from other medication entries.	☒ Yes ☐ No
Inpatient	IP 06.12.01	The system shall provide the ability to indicate that interaction checking will not occur against free text medications.	☒ Yes ☐ No
Inpatient	IP 06.16	The system shall provide the ability to display potential side effects of medications from the medication list.	☒ Yes ☐ No
Inpatient	FN 06.02	The system shall provide the ability to display a view that includes only active medications.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 06.04	The system shall provide the ability to print a current medication list.	☒ Yes ☐ No
Inpatient	FN 06.05	The system shall provide the ability to display that the patient takes no medications.	☒ Yes ☐ No
Inpatient	FN 06.06	The system shall provide the ability to capture and maintain, as discrete data elements, all current medications including over-the-counter and complementary medications such as vitamins, herbs and supplements.	☒ Yes ☐ No
Inpatient	IP 07.01	The system shall provide the ability to display test results during the ordering process.	☒ Yes ☐ No
Inpatient	IP 07.02	The system shall provide the ability to display test results during medication administration.	☒ Yes ☐ No
Inpatient	IP 08.01	The system shall provide the ability to display patient name, identification number, and age or date of birth on all order screens.	☒ Yes ☐ No
Inpatient	IP 08.04	The system shall provide the ability to display an indicator that the patient has allergies (allergies exist), or no known allergies, on all order screens.	☒ Yes ☐ No
Inpatient	IP 08.05	The system shall provide the ability to document a verbal order (including telephone orders); documentation shall include the ordering clinician as well as the clinician taking the verbal order.	☒ Yes ☐ No
Inpatient	IP 08.07	The system shall provide the ability to document a verification “read-back” of the complete order by the person receiving the telephone or verbal order.	☒ Yes ☐ No
Inpatient	IP 08.09	The system shall provide the ability to include urgency status in orders.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 08.10	The system shall provide the ability for clinicians to write all patient care orders electronically, including, but not limited to nursing care, medications / immunizations, diagnostic testing, nutrition and food service, consultation, and blood products.	☒ Yes ☐ No
Inpatient	IP 08.11	The system shall provide the ability to renew, modify, and discontinue orders.	☒ Yes ☐ No
Inpatient	IP 08.13	For each order type, the system shall provide the ability to capture and display the identity of the user, the date and the time when the order is signed, co-signed, renewed, modified or discontinued.	☒ Yes ☐ No
Inpatient	IP 08.14	The system shall provide the ability to display order history for any order, including the ordering clinician, order details, date, and time.	☒ Yes ☐ No
Inpatient	IP 08.15	The system shall provide the ability to set or configure the entry fields available for each order by order type.	☒ Yes ☐ No
Inpatient	IP 08.16	The system shall provide the ability to set or configure which fields are required for a complete order by order type.	☒ Yes ☐ No
Inpatient	IP 08.17	The system shall provide the ability to configure orders within order sets with default order details.	☒ Yes ☐ No
Inpatient	IP 08.18	The system shall provide the ability for the ordering provider to include free text comments or instructions in the order to be viewed by providers departments/services fulfilling the order or service.	☒ Yes ☐ No
Inpatient	IP 08.19	The system shall provide the ability to associate an order of any type (including medication order) with a related clinical problem(s) and/or diagnosis code(s) and description.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 08.20	The system shall provide the ability to allow the entry of orders to be activated at a future date and time including admission orders, discharge orders, and post-op orders.	☒ Yes ☐ No
Inpatient	IP 08.22	The system shall provide the ability to print orders for all order types.	☒ Yes ☐ No
Inpatient	IP 08.24	The system shall provide the ability to enter conditional orders that can be activated when certain criteria and conditions are met.	☒ Yes ☐ No
Inpatient	IP 08.26	The system shall provide the ability for a clinician to save frequently used and institutionally approved orderables or order sets as “favorites” or "preferences" to facilitate retrieval and ordering.	☒ Yes ☐ No
Inpatient	IP 08.27	The system shall provide the ability to display orders for a patient by different views.	☒ Yes ☐ No
Inpatient	FN 09.05	The system shall provide the ability for cosigned orders to retain and display the identities of all providers who co-sign the order.	☒ Yes ☐ No
Inpatient	IP 08.30	The system shall provide the ability to electronically communicate the order to the receiving departmental system.	☒ Yes ☐ No
Inpatient	FN 09.02	The system shall provide the ability to view status information for ordered services.	☒ Yes ☐ No
Inpatient	IP 08.32	The system shall provide the ability to designate access to entering individual orders by user role.	☒ Yes ☐ No
Inpatient	FN 09.01	The system shall provide the ability to require problem / diagnosis as an order component.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 09.04	The system shall provide the ability to capture and maintain, as discrete data, a diagnosis/problem code or description associated with an order of any type (including prescriptions and medications ordered for administration).	☒ Yes ☐ No
Inpatient	IP 12.30	The system shall be capable of designating explicit routes for medications and prohibit selection of other routes during the ordering process.	☒ Yes ☐ No
Inpatient	IP 09.01	The system shall provide the ability to define user roles with access to order set management.	☒ Yes ☐ No
Inpatient	IP 09.02	The system shall provide the ability to support the management of order sets to track history of updates including date and time.	☒ Yes ☐ No
Inpatient	IP 09.03	The system shall provide the ability to include date last modified in the display of order sets.	☒ Yes ☐ No
Inpatient	IP 09.04	The system shall provide the ability to configure order sets with pre-selected orders.	☒ Yes ☐ No
Inpatient	IP 09.05	The system shall provide the ability to incorporate multiple choices of medications or other types of orders within an order set for clinician selection.	☒ Yes ☐ No
Inpatient	IP 09.16	The system shall provide the ability to incorporate text instructions or recommendations within order sets.	☒ Yes ☐ No
Inpatient	IP 09.17	The system shall provide the ability to display individual orders in order sets with pre-selected order details.	☒ Yes ☐ No
Inpatient	IP 09.18	The system shall provide the ability to restrict access to individual order sets by user role or department	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 09.19	The system shall provide the ability to display active links within an order set to applicable clinical standards and reference materials.	☒ Yes ☐ No
Inpatient	FN 11.02	The system shall provide the ability to allow users to search for order sets by name.	☒ Yes ☐ No
Inpatient	IP 09.22	The system shall provide the ability to display orders in an order set in the same manner as when the order is placed individually.	☒ Yes ☐ No
Inpatient	IP 09.28	The system shall provide the ability to embed order sets within other order sets.	☒ Yes ☐ No
Inpatient	FN 11.03	The system shall provide the ability to apply drug-drug and drug-allergy interaction checking in the same way to orders placed through an order set as to orders placed individually.	☒ Yes ☐ No
Inpatient	IP 09.32	The system shall provide the ability to report on the use of order sets, including data such as orders, ordering provider, date/time ordered and basic patient data (for example age, diagnoses).	☒ Yes ☐ No
Inpatient	FN 10.01	The system shall provide the ability to define a set of items to be ordered as a group.	☒ Yes ☐ No
Inpatient	FN 10.02	The system shall provide the ability to modify order sets.	☒ Yes ☐ No
Inpatient	FN 10.03	The system shall provide the ability to include in an order set order types including but not limited to medications, laboratory tests, imaging studies, procedures and referrals.	☒ Yes ☐ No
Inpatient	FN 11.01	The system shall provide the ability for individual orders in an order set to be selected or deselected by the user.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 11.04	The system shall provide the ability to display orders placed through an order set either individually or as a group.	☒ Yes ☐ No
Inpatient	IP 10.01	The system shall have the ability to report on the ordering of nonformulary medications	☒ Yes ☐ No
Inpatient	IP 08.02	The system shall provide the ability to display the patient's weight, or an indicator that the patient has a weight recorded, on medication ordering screens.	☒ Yes ☐ No
Inpatient	IP 08.03	The system shall provide the configurable ability to display the patient's body surface area, or an indicator that the patient has a body surface area recorded, on medication ordering screens.	☒ Yes ☐ No
Inpatient	IP 10.03	The system shall provide the ability to order medication doses in mg/kg and mL/kg.	☒ Yes ☐ No
Inpatient	IP 10.04	The system shall provide the ability to allow the clinician to order medication doses in mg/kg/min, microgram/kg, and microgram/kg/min.	☒ Yes ☐ No
Inpatient	IP 10.06	The system shall provide end-users with the ability to browse or search for a drug by therapeutic class when ordering a medication.	☒ Yes ☐ No
Inpatient	IP 10.08	The system shall provide the ability to renew an existing medication order without requiring re-entry of order information.	☒ Yes ☐ No
Inpatient	IP 10.09	The system shall provide the ability for order entry of medications that are brought in from home that the Pharmacy is not dispensing.	☒ Yes ☐ No
Inpatient	IP 10.10	The system shall provide the ability to document complex medication orders that include dosing based on either physical status or laboratory values.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 10.11	The system shall provide the ability to enter all order details for medication orders that include dosing adjustments and limits.	☒ Yes ☐ No
Inpatient	IP 10.12	The system shall provide the ability to display the eMAR without interrupting the ordering process.	☒ Yes ☐ No
Inpatient	IP 10.14	The system shall provide the ability to modify medication orders including dosing information without having to discontinue the order.	☒ Yes ☐ No
Inpatient	IP 10.15	The system shall provide the ability to configure orders that require co-signature.	☒ Yes ☐ No
Inpatient	IP 10.16	The system shall provide the ability to enter medication orders utilizing a sliding scale.	☒ Yes ☐ No
Inpatient	IP 10.26	The system shall provide the ability to compute drug doses, based on appropriate dosage ranges, using the patient's body surface area and ideal body weight.	☒ Yes ☐ No
Inpatient	IP 10.27	The system shall provide the ability to automatically alert the provider to missing or invalid data required to compute a dose.	☒ Yes ☐ No
Inpatient	FN 07.01	The system shall provide the ability to alert the user at the time a new medication is prescribed/ordered that drug interaction, allergy, and formulary checking will not be performed against the uncoded medication or free text medication.	☒ Yes ☐ No
Inpatient	FN 07.02	The system shall provide the ability to prescribe/order uncoded and non-formulary medications.	☒ Yes ☐ No
Inpatient	FN 07.03	The system shall provide the ability to maintain a coded list of medications including a unique identifier for each medication.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 07.04	The system shall provide end-users the ability to search for medications by generic or brand name.	☒ Yes ☐ No
Inpatient	FN 07.05	The system shall provide the ability to access reference information for prescribing/ordering.	☒ Yes ☐ No
Inpatient	FN 07.06	The system shall provide the ability to specify medication order details including dose, route, frequency and comments. Dose, route and frequency must be captured and maintained as discrete data.	☒ Yes ☐ No
Inpatient	FN 12.01	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and current medications and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Inpatient	FN 12.04	The system shall provide the ability to display, on demand, potential allergies and drug-drug interactions between current medications.	☒ Yes ☐ No
Inpatient	FN 12.05	The system shall provide the ability to view the rationale for a drug interaction alert.	☒ Yes ☐ No
Inpatient	FN 12.06	The system shall provide the ability to capture and maintain at least one reason for overriding any drug-drug or drug-allergy interaction warning triggered at the time of medication prescribing/ordering.	☒ Yes ☐ No
Inpatient	FN 12.07	The system shall provide the ability to enter a structured response when overriding a drug-drug or drug-allergy warning.	☒ Yes ☐ No
Inpatient	FN 12.08	The system shall provide the ability to prescribe/order a medication despite alerts for interactions and/or allergies being present.	☒ Yes ☐ No
Inpatient	FN 12.09	The system shall provide the ability to accept updates to drug interaction databases	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Inpatient	IP 11.01	The system shall provide the ability to allow the designation of the source of information on home medications.	☒ Yes ☐ No
Inpatient	IP 11.07	The system shall provide the ability to display home medications for provider review for medication reconciliation during writing of admission orders.	☒ Yes ☐ No
Inpatient	IP 11.08	At admission and discharge from the hospital, the system shall provide the ability to permit the clinician to designate which home medications are being continued / discontinued.	☒ Yes ☐ No
Inpatient	IP 11.09	At admission, the system shall provide the ability to display corresponding inpatient orders for home medications the provider designates as being continued.	☒ Yes ☐ No
Inpatient	IP 11.10	At each change in level of care (to ICU, to surgery, discharge), the system shall display prior, active medication orders for provider review during writing of admission/transfer orders.	☒ Yes ☐ No
Inpatient	IP 11.11	At discharge and each change in level of care, the system shall provide the ability to designate which current medications are continued / discontinued, and to display the orders for continued medications.	☒ Yes ☐ No
Inpatient	IP 11.13	At admission, discharge, and each change in level of care during the hospital stay, the system shall capture signature that medication reconciliation has been completed.	☒ Yes ☐ No
Inpatient	IP 11.14	At admission, discharge, and each change in level of care, the system shall provide the ability to retain the history of medication reconciliation (including prior medications reviewed, medications continued/discontinued, new medication orders, signature of each provider completing review) for subsequent review.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 11.15	At discharge, the system shall provide the ability to communicate, both electronically and via paper, discharge medications and allergies.	☒ Yes ☐ No
Inpatient	IP 11.16	At discharge, the system shall provide the ability to communicate, both electronically and via paper, current weight (including date and time of measurement).	☒ Yes ☐ No
Inpatient	IP 12.01	The system shall provide the ability to detect a drug dose that falls outside the min-max range for a single dose for the medication and to inform the clinician during ordering.	☒ Yes ☐ No
Inpatient	FN 08.01	The system shall provide the ability to detect a daily dose that exceeds the recommended range for patient age and inform the user during ordering.	☒ Yes ☐ No
Inpatient	IP 12.04	The system shall provide the ability to detect a cumulative dose (across inpatient stays and lifetime) that exceeds the recommended dose and inform the clinician during ordering.	☒ Yes ☐ No
Inpatient	IP 12.11	The system shall be capable of providing advance notification during ordering, for patients on a given medication, when they are due for required laboratory or other diagnostic studies to monitor for therapeutic or adverse effects of the medication.	☒ Yes ☐ No
Inpatient	IP 12.12	The system shall provide the ability to search from medication lists which use “Tall Man” letters.	☒ Yes ☐ No
Inpatient	IP 12.14	The system shall provide the ability to identify when multiple medications of the same therapeutic or pharmacologic class are ordered and inform the user when medications are selected during prescribing / ordering.	☒ Yes ☐ No
Inpatient	IP 12.15	The system shall provide the ability to exclude therapeutic categories and drug pairs from drug-drug interaction and therapeutic overlap checking.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 12.16	The system shall provide the ability to assign the level of medication checking based upon user role.	☒ Yes ☐ No
Inpatient	FN 12.10	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and medication allergies listed in the record and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Inpatient	FN 12.11	The system shall provide the ability, when a new allergy is documented, to check for a potential interaction between the newly-documented allergy and the patient's current medications, and alert the user if such interactions exist.	☒ Yes ☐ No
Inpatient	IP 12.23	The system shall provide the ability to set the severity level at which drug interaction warnings should be displayed.	☒ Yes ☐ No
Inpatient	FN 12.02	The system shall provide the ability to check immunization orders against documented patient allergies (medication and non-medication) and inform the user during prescribing/ordering.	☒ Yes ☐ No
Inpatient	IP 12.25	The system shall provide the configurable ability to require documentation of information regarding patient weight, inclusive of using such terms as Unknown, before entering medication orders.	☒ Yes ☐ No
Inpatient	IP 12.26	The system shall provide the ability to inform the clinician about potential drug-food interactions.	☒ Yes ☐ No
Inpatient	IP 12.27	The system shall provide the ability to check contraindications based on pregnancy status	☒ Yes ☐ No
Inpatient	IP 12.28	The system shall provide the ability to check contraindications based on lactation status	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 12.29	The system shall provide the ability to check for inappropriate route of administration and alert the user at time of medication prescribing / ordering.	☒ Yes ☐ No
Inpatient	IP 12.31	The system shall provide the ability to display recommended medication for substitution (based on cost or clinical policy).	☒ Yes ☐ No
Inpatient	IP 12.33	The system shall provide the ability to transmit to Pharmacy the order override justification with the order and clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 12.35	The system shall provide the ability to capture and store information concerning alerts following screening of medication orders and the response (place, modify or cancel order).	☒ Yes ☐ No
Inpatient	IP 12.36.01	The system shall have the ability to report on alerts and provider response occurring during the medication ordering process (place, modify, cancel)	☒ Yes ☐ No
Inpatient	IP 12.41	The system shall provide the ability to enter new vaccine dosing schedules into the system in advance of official CDC schedule updates.	☒ Yes ☐ No
Inpatient	FN 08.03	The system shall provide the ability to check for dose ranges based on patient age.	☒ Yes ☐ No
Inpatient	FN 08.04	The system shall provide the ability to display a dose calculator for patient-specific dosing based on weight.	☒ Yes ☐ No
Inpatient	FN 08.05	The system shall provide the ability to display patient specific dosing recommendations based on age and weight.	☒ Yes ☐ No
Inpatient	FN 08.06	The system shall provide the ability to check for medication contraindications based on patient age and alert the user during prescribing/ordering.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 13.01	The system shall provide drug-diagnosis interaction alerts at the time of medication prescribing/ordering.	☒ Yes ☐ No
Inpatient	IP 13.01	The system shall provide the ability to display relevant, patient-specific laboratory test results when entering an order.	☒ Yes ☐ No
Inpatient	IP 13.04	The system shall provide the ability to display for selection a secondary, or corollary, order that is recommended in conjunction with the primary order.	☒ Yes ☐ No
Inpatient	IP 13.05	The system shall allow demographic criteria to be used as a data element in clinical decision support rules.	☒ Yes ☐ No
Inpatient	FN 18.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for variation from rule-based clinical messages (for example alerts and reminders).	☒ Yes ☐ No
Inpatient	IP 13.08	The system shall provide the ability to set elapsed time parameters for purposes of duplicate order checking.	☒ Yes ☐ No
Inpatient	IP 14.01	The system shall provide the ability to present medications to be administered over a selectable date/time range during the current hospital stay.	☒ Yes ☐ No
Inpatient	IP 14.02	The system shall provide the ability to display the medication administration history including administering clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 14.03	The system shall provide the ability to display the ordered date, time, route of administration and dose of all scheduled medications.	☒ Yes ☐ No
Inpatient	IP 14.05	The system shall allow the clinician to identify and display due and overdue medications.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.06	The system shall provide the ability to display continuous infusions in a manner that distinguishes them from other medications.	☒ Yes ☐ No
Inpatient	IP 14.07	The system shall provide the ability to display PRN medications in a manner that distinguishes them from other medications.	☒ Yes ☐ No
Inpatient	IP 14.08	The system shall provide the ability to record the effectiveness of PRN or "as needed" doses after they have been administered on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.10	The system shall have the ability to view on the eMAR medications as dispensed (including dose and quantity of dispensed units of medication).	☒ Yes ☐ No
Inpatient	IP 14.11	The system shall provide the ability to indicate any clinical interventions or assessments associated with medication administration.	☒ Yes ☐ No
Inpatient	IP 14.12	The system shall provide the ability to attach a comment to an individual scheduled medication dose and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 14.13	The system shall provide the ability to capture medication administration details as discrete data, including: (1) the medication name, strength and dose; (2) date and time of administration; (3) route and site; (4) user name and credentials.	☒ Yes ☐ No
Inpatient	IP 14.14	The system shall provide the ability to view the medication order as written during administration.	☒ Yes ☐ No
Inpatient	IP 14.15	The system shall provide the ability to document clinical assessment pertinent to medication administration.	☒ Yes ☐ No
Inpatient	IP 14.16	The system shall provide the ability to display, from the eMAR, the location of the medication on the unit.	☐ Yes ☒ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.17	The system shall allow the user to capture and display patient specific instructions or other free text on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.18	The system shall provide ability for a second provider to witness and co-document administration.	☒ Yes ☐ No
Inpatient	IP 14.19	The system shall provide the ability to document medication administration using a barcode and scanner for positive patient identification, patient name, med name, med dose, correct time of admin, route and positive identification of care giver administering medication.	☒ Yes ☐ No
Inpatient	IP 14.20	When using barcode scanners, the system shall provide the ability to alert the end user that the medication being administered has triggered one or more of the following errors: wrong patient, wrong med, wrong time, wrong route or wrong dose.	☒ Yes ☐ No
Inpatient	IP 14.23	The system shall provide the ability to modify medication administration schedules on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.24	The system shall provide the ability to notify the Pharmacy of changes in schedules on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.25	The system shall provide the ability to acknowledge medication orders prior to administration, capturing the date, time and user performing action.	☒ Yes ☐ No
Inpatient	IP 14.26	The system shall provide the ability to allow documentation of medication administration prior to pharmacy review.	☒ Yes ☐ No
Inpatient	IP 14.27	The system shall provide the ability to document on the eMAR that a medication was given by another provider.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.28	The system shall provide the ability for the hospital to provide links to reference information / knowledge resources for any medication on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.29	The system shall provide the ability to capture and maintain, as discrete data, the reason a medication was not given.	☒ Yes ☐ No
Inpatient	IP 14.30	The system shall provide the ability to amend medication administration documentation and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 06.13	The system shall provide the ability to correct medication administration documentation entered in error, maintaining a record of the original entry, identification of the clinician correcting the error and the date and time of the correction.	☒ Yes ☐ No
Inpatient	IP 14.31	The system shall provide ability to document a reaction / response to medication administration.	☒ Yes ☐ No
Inpatient	IP 14.32	The system shall maintain and display as part of the medication administration profile the dates and times associated with the medication orders such as start, modify, and stop dates.	☒ Yes ☐ No
Inpatient	IP 14.34	The system shall provide the ability for the eMAR to be printed.	☒ Yes ☐ No
Inpatient	FN 14.01	The system shall provide the ability to produce patient instructions and patient educational materials which may reside within the system or be provided through links to external source.	☒ Yes ☐ No
Inpatient	IP 15.01	The system shall provide the ability to display immunization administration history including; administering clinician, date and time, immunization name, lot number, manufacturer and expiration date.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 15.03	The system shall provide the ability to identify and display due and overdue ordered immunizations.	☒ Yes ☐ No
Inpatient	IP 15.04	The system shall provide the ability to indicate any tasks/assessments associated with immunization administration.	☒ Yes ☐ No
Inpatient	IP 15.05	The system shall provide the ability to attach a comment to an individual scheduled immunization dose and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 15.06	The system shall provide the ability to display the immunization order as written during administration.	☒ Yes ☐ No
Inpatient	IP 15.07	The system shall provide the ability to document clinical assessment pertinent to immunization administration.	☒ Yes ☐ No
Inpatient	IP 15.09	The system shall provide the ability to amend immunization administration documentation and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 15.10	The system shall provide the ability to document that a Vaccine Information Statement (VIS) was given including the version or edition date of the VIS.	☒ Yes ☐ No
Inpatient	IP 15.11	The system shall provide the ability to print the immunization administration record.	☒ Yes ☐ No
Inpatient	IP 15.12	The system shall have the ability to record the consent, refusal, or deferral status as it relates to the administration of each immunization at the time of each encounter, including: the date and time, the decision (consent, refusal or deferral), name of decider and status of decider (e.g. parent, self, legal guardian, medical power of attorney).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 16.02	The system shall provide the ability to capture, in a discrete field, an allergy/adverse reaction to a specific immunization.	☒ Yes ☐ No
Inpatient	FN 16.03	The system shall provide the ability to capture immunization administration details as discrete data, including: (1) the immunization type and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Inpatient	IP 16.01	The system shall provide the ability to display, in the eMAR, drug-allergy interactions at the time of administration.	☒ Yes ☐ No
Inpatient	IP 16.02	System shall provide the ability to require entry of physiological parameters or task completion that must be checked and recorded prior to medication administration	☒ Yes ☐ No
Inpatient	IP 16.03	The system shall provide the ability to display, at the time of medication administration, that an alert was triggered during medication ordering.	☒ Yes ☐ No
Inpatient	IP 16.05	The system shall provide the ability for medication screening alerts to be displayed from the eMAR.	☒ Yes ☐ No
Inpatient	IP 16.08	The system shall provide the ability to capture medication identification for five rights checking, at a minimum, from linear bar code labels encoding the NDC number.	☒ Yes ☐ No
Inpatient	IP 16.09	The system shall provide the ability to document medication administration using a positive ID technology to confirm right patient, right medication, right dose, right time, and right route.	☒ Yes ☐ No
Inpatient	IP 16.10	The system shall have the ability to document "manual" methods verifying Five Rights information (e.g., Bar code does not work; the bar code reader is not working).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 16.11	The system shall provide the ability to record the medication NDC number or other identification number of the drug actually administered to the patient.	☒ Yes ☐ No
Inpatient	IP 16.12	The system shall be able to identify all patients on a specific medication.	☒ Yes ☐ No
Inpatient	IP 17.01	The system shall provide the ability to establish time periods for designating medication administration tasks overdue.	☒ Yes ☐ No
Inpatient	IP 17.02	The system shall provide the ability to establish time periods and recipients for notification of overdue medication administrations.	☒ Yes ☐ No
Inpatient	IP 17.03	The system shall provide the ability to notify the clinician of overdue medication administrations.	☒ Yes ☐ No
Inpatient	IP 17.04	The system shall provide the ability to establish time periods for order expiration for types of orders.	☒ Yes ☐ No
Inpatient	IP 17.05	The system shall provide the ability to notify the ordering clinician concerning orders due to expire.	☒ Yes ☐ No
Inpatient	IP 17.08	The system shall provide the ability to notify the ordering clinician concerning orders requiring signature (verbal and telephone orders, co signature).	☒ Yes ☐ No
Inpatient	FN 17.01	The system shall provide the ability to access and review medication information (such as drug monograph). This may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Inpatient	FN 17.02	The system shall provide the ability to provide access to test and procedure instructions that can be modified by the end user.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 19.01	The system shall provide the ability to display patient data from previous admissions.	☒ Yes ☐ No
Inpatient	IP 19.02	The system shall provide the ability to include patient identifying information as well as time and date report printed, on each page of individual patient-specific reports generated.	☒ Yes ☐ No
Inpatient	IP 19.08	The system shall provide the ability to indicate that advance directive(s) have been completed.	☒ Yes ☐ No
Inpatient	IO-IP 01.01	The system shall provide the ability to receive the Current Medication List from Pharmacy (directly), PBM (directly) or via intermediary network (e.g. SureScripts, RxHub, etc.)	☒ Yes ☐ No
Inpatient	IO-IP 01.20	The system shall provide the ability to display HITSP C32/CCD documents and file them as intact documents in the EHR. Summary patient record content information will include: patient demographics, medication list, medication allergy list	☒ Yes ☐ No
Inpatient	IO-IP 01.22	The system shall provide the ability to generate and format patient summary documents per the following specifications: HITSP C32 (v2.3 or v2.5) Summary patient record content information will include: patient demographics, medications, medication allergies Generated xml documents must demonstrate use of industry-standard vocabularies/terminologies. The intent is to test the Required (R) fields including the product coded terminology for the medication and medication allergy.	☒ Yes ☐ No
Inpatient	IO-IP 03.01	The system shall provide the ability to receive Patient Demographics and Administrative Information from inpatient IT systems (e.g., name,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		age, DOB, gender)	☐ No
Inpatient	IO-IP 03.04	The system shall provide the ability to send Non-Medication Orders and Updates to receiving system (e.g., LIS, RIS, Dietary)	☒ Yes ☐ No
Inpatient	IO-IP 03.05	The system shall provide the ability to send Medication Orders and Updates to Pharmacy IT system utilizing a coding system for medications	☐ Yes ☒ No
Inpatient	IO-IP 03.06	The system shall provide the ability to receive Status Updates from Pharmacy	☐ Yes ☒ No
Inpatient	IO-IP 03.07	The system shall provide the ability to provide access and view capabilities for relevant lab results for medication ordering or administration	☒ Yes ☐ No
Inpatient	IO-IP 03.10	The system shall provide the ability to Integrate with bar-code technology to capture information from linear bar code labels and wristbands	☒ Yes ☐ No
Inpatient	IO-IP 04.01	The system shall provide the ability to send an electronic prescription of discharge medications	☒ Yes ☐ No
Inpatient	SC 01.01	The system shall enforce the most restrictive set of rights/privileges or accesses needed by users/groups (e.g. System Administration, Clerical, Nurse, Doctor, etc.), or processes acting on behalf of users, for the performance of specified tasks.	☒ Yes ☐ No
Inpatient	SC 01.02	The system shall provide the ability for authorized administrators to assign restrictions or privileges to users/groups.	☒ Yes ☐ No
Inpatient	SC 01.03	The system must be able to associate permissions with a user using one or more of the following access controls: 1) user-based (access rights assigned to each user); 2) role-based (users are grouped and access rights assigned to these groups); or 3) context-based (role-based with additional access rights assigned or restricted	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	
Inpatient	SC 01.04	The system shall support removal of a user's privileges without deleting the user from the system. The purpose of the criteria is to provide the ability to remove a user's privileges, but maintain a history of the user in the system.	☒ Yes ☐ No
Inpatient	SC 02.01	The system shall allow an authorized administrator to set the inclusion or exclusion of auditable events in SC 02.03 based on organizational policy & operating requirements/limits.	☒ Yes ☐ No
Inpatient	SC 02.02	The system shall support logging to a common audit engine using the schema and transports specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA) Profile.	☒ Yes ☐ No
Inpatient	SC 02.03	The system shall be able to detect security-relevant events that it mediates and generate audit records for them. At a minimum the events shall include those listed in the Appendix Audited Events. Note: The system is only responsible for auditing security events that it mediates. A mediated event is an event that the system has some active role in allowing or causing to happen or has opportunity to detect. The system is not expected to create audit logs entries for security events that it does not mediate.	☒ Yes ☐ No
Inpatient	SC 02.04	The system shall record within each audit record the following information when it is available: (1) date and time of the event; (2) the component of the system (e.g. software component, hardware component) where the event occurred; (3) type of event (including: data description and patient identifier when relevant); (4) subject identity (e.g. user identity); and (5) the outcome (success or failure) of the event.	☒ Yes ☐ No
Inpatient	SC 02.05	The system shall provide authorized administrators with the capability to read all audit information from the audit records in one of the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		following two ways: 1) The system shall provide the audit records in a manner suitable for the user to interpret the information. The system shall provide the capability to generate reports based on ranges of system date and time that audit records were collected. 2) The system shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. UTC synchronization).	☐ No
Inpatient	SC 02.06	The system shall be able to support time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.	☒ Yes ☐ No
Inpatient	SC 02.07	The system shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. Example: "1994-11-05T08:15:30-05:00" corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.	☒ Yes ☐ No
Inpatient	SC 02.08	The system shall prohibit all users read access to the audit records, except those users that have been granted explicit read-access. The system shall protect the stored audit records from unauthorized deletion. The system shall prevent modifications to the audit records.	☒ Yes ☐ No
Inpatient	SC 03.01	The system shall authenticate the user before any access to Protected Resources (e.g. PHI) is allowed, including when not connected to a network e.g. mobile devices.	☒ Yes ☐ No
Inpatient	SC 03.02	When passwords are used, the system shall support password strength rules that allow for minimum number of characters, and inclusion of alpha-numeric complexity.	☒ Yes ☐ No
Inpatient	SC 03.03	The system upon detection of inactivity of an interactive session shall prevent further viewing and access to the system by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout shall be configurable.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 03.04	The system shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The system shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	☒ Yes ☐ No
Inpatient	SC 03.05	When passwords are used, the system shall provide an administrative function that resets passwords.	☒ Yes ☐ No
Inpatient	SC 03.06	When passwords are used, user accounts that have been reset by an administrator shall require the user to change the password at next successful logon.	☒ Yes ☐ No
Inpatient	SC 03.07	The system shall provide only limited feedback information to the user during the authentication.	☒ Yes ☐ No
Inpatient	SC 03.08	The system shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Inpatient	SC 03.09	When passwords are used, the system shall allow an authenticated user to change their password consistent with password strength rules (SC 03.02).	☒ Yes ☐ No
Inpatient	SC 03.10	When passwords are used, the system shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Inpatient	SC 03.11	When passwords are used, the system shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords.	☒ Yes ☐ No
Inpatient	SC 03.12	When passwords are used, the system shall prevent the reuse of passwords previously used within a specific (configurable) timeframe (i.e.,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		within the last X days, etc. - e.g. "last 180 days"), or shall prevent the reuse of a certain (configurable) number of the most recently used passwords (e.g. "last 5 passwords").	☐ No
Inpatient	SC 04.01	The system shall include documentation that describes the patch (hot-fix) handling process the vendor will use for EHR, operating system and underlying tools (e.g. a specific web site for notification of new patches, an approved patch list, special instructions for installation, and post-installation test).	☒ Yes ☐ No
Inpatient	SC 04.02	The system shall include documentation that explains system error or performance messages to users and administrators, with the actions required.	☒ Yes ☐ No
Inpatient	SC 04.03	The system shall include documentation of product capacities (e.g. number of users, number of transactions per second, number of records, network load, etc.) and the baseline representative configurations assumed for these capacities (e.g. number or type of processors, server/workstation configuration and network capacity, etc).	☒ Yes ☐ No
Inpatient	SC 04.04	The system shall include documented procedures for product installation, start-up and/or connection.	☒ Yes ☐ No
Inpatient	SC 04.05	The system shall include documentation of the minimal privileges necessary for each service and protocol necessary to provide EHR functionality and/or serviceability.	☒ Yes ☐ No
Inpatient	SC 04.06	The system shall include documentation available to the customer stating whether or not there are known issues or conflicts with security services in at least the following service areas: antivirus, intrusion detection, malware eradication, host-based firewall and the resolution of that conflict (e.g. most systems should note that full virus scanning should be done outside of peak usage times and should exclude the databases.).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 04.07	If the system includes hardware, the system shall include documentation that covers the expected physical environment necessary for proper secure and reliable operation of the system including: electrical, HVAC, sterilization, and work area.	☒ Yes ☐ No
Inpatient	SC 04.08	The system shall include documentation that itemizes the services (e.g. PHP, web services) and network protocols/ports (e.g. HL-7, HTTP, FTP) that are necessary for proper operation and servicing of the system, including justification of the need for that service and protocol. This information may be used by the healthcare facility to properly configure their network defenses (firewalls and routers).	☒ Yes ☐ No
Inpatient	SC 04.09	The system shall include documentation that describes the steps needed to confirm that the system installation was properly completed and that the system is operational.	☒ Yes ☐ No
Inpatient	SC 04.10	The system shall include documentation available to the customer that provides guidelines for configuration and use of the security controls necessary to support secure and reliable operation of the system, including but not limited to: creation, modification, and deactivation of user accounts, management of roles, reset of passwords, configuration of password constraints, and audit logs.	☒ Yes ☐ No
Inpatient	SC 05.01	The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software (“malware”). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	☒ Yes ☐ No
Inpatient	SC 05.02	The system shall be configurable to prevent corruption or loss of data already accepted into the system in the event of a system failure (e.g. integrating with a UPS, etc.).	☒ Yes ☐ No
Inpatient	SC 06.01	The system shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as TLS, SSL, IPSec, XML encryptions, or S/MIME or their successors.	☐ No
Inpatient	SC 06.02	When passwords are used, the system shall not display passwords while being entered.	☒ Yes ☐ No
Inpatient	SC 06.03	For systems that provide access to PHI through a web browser interface (i.e. HTML over HTTP) shall include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS). Note: Web browser interfaces are often used beyond the perimeter of the protected enterprise network	☒ Yes ☐ No
Inpatient	SC 06.04	The system shall support protection of integrity of all Protected Health Information (PHI) delivered over the Internet or other known open networks via SHA1 hashing and an open protocol such as TLS, SSL, IPSec, XML digital signature, or S/MIME or their successors.	☒ Yes ☐ No
Inpatient	SC 06.05	The system shall support ensuring the authenticity of remote nodes (mutual node authentication) when communicating Protected Health Information (PHI) over the Internet or other known open networks using an open protocol (e.g. TLS, SSL, IPSec, XML sig, S/MIME).	☒ Yes ☐ No
Inpatient	SC 06.06	The system, when storing PHI on any device intended to be portable/removable (e.g. thumb-drives, CD-ROM, PDA, Notebook), shall support use of a standards based encrypted format using triple-DES (3DES), or the Advanced Encryption Standard (AES), or their successors.	☒ Yes ☐ No
Inpatient	SC 06.07	The system, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The system should only be accessed by authorized users"). In the event that a system does not support pre-login capabilities, the system shall display the banner immediately following authorization.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 08.01	The system shall be able to generate a backup copy of the application data, security credentials, and log/audit files.	☒ Yes ☐ No
Inpatient	SC 08.02	The system restore functionality shall result in a fully operational and secure state. This state shall include the restoration of the application data, security credentials, and log/audit files to their previous state.	☒ Yes ☐ No
Inpatient	SC 08.03	If the system claims to be available 24x7 then the system shall have ability to run a backup concurrently with the operation of the application.	☒ Yes ☐ No

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2.1.2 BEST PRACTICES

Provide Proposer's overall summary description of how it has leveraged best practices for EHR implementations, pursuant to Section 1.2 (Best Practices) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

MethodM is Cerner's implementation approach to working with clients to deliver value through our Millennium solutions. MethodM is more than an implementation approach and this modular methodology draws upon proven practices from a host of past client experiences. With it, a team is able to deliver the intended outcomes of a project with discipline, predictability and efficiency.

MethodM provides a disciplined approach to implementation, system adoption and value realization. The proven methodology provides a clearly defined project scope that aligns with your project's clinical and operational imperatives and comprehensive education and training objectives. MethodM also incorporates Cerner's recommended practices in the management of crucial project milestones and detailed solution-level content to provide guidance and overall support throughout the project. The content has been designed to provide the correct information at the right point in the engagement to help you make sound decisions and guide you through every stage of your project. Additionally, the content provides a framework for the various processes required to manage and execute your project.

As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership.

Cerner MethodM is an integrated platform, providing these important features:

1. Outcomes-based approach
2. Aligning with your organizational imperatives
3. Disciplined and predictable processes
4. Providing the right resource at the right time
5. Leveraged client interaction and experience
6. Proven to reduce risk and variability
7. A logical continuum
8. From procurement to clinical transformation

2.1.3 GENERAL REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for ambulatory care, pursuant to Section 1.3 (General Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 6 pages.

The strength of Cerner Millennium begins with the power of its architecture, which is based on one comprehensive database. Cerner Millennium solutions are structured around a single design, which allows information sharing across multiple facilities and across the continuum of healthcare. With our single data structure, Cerner Millennium provides real-time access to all information across multiple applications, such as laboratory, pharmacy, nursing and physicians, to all of those needing such access, regardless of location. Other suppliers' systems that are based on differing architectures and data structures must be interfaced together, and rely on these interfaces to transmit, modify and arrange data exchanged between them. This limits the data's usefulness across multiple systems and inhibits real-time access.

Only Cerner Millennium offers proven, person-centric, integrated clinical technologies that connect all areas of a healthcare organization to leverage patient data and best practices for better quality of care. Any clinical information that is gathered in any care setting is populated in the single integrated longitudinal electronic medical record. The clinical data repository viewer is designed to support communication across the health system by providing a cross- departmental cross-disciplinary, person focused view of clinical information. Because it is built from the common, open platform for all Cerner solutions, we can provide the only readily available solution that closes the loop with other clinical domains.

Flexible display features within the Cerner Millennium applications allow the clinician to create optimal views of the data. A multitude of viewing and navigation preferences can be utilized to maximize the communication of information to the clinician, both as predefined views as well as interactively during real-time record viewing. These tailored summary views and custom flowsheets can be defined to meet the needs of various disciplines within your organization.

Cerner offers a variety of applications and features that enable our client organizations to become HIPAA compliant. However, compliance requirements in the areas of Privacy and Security rules also are very much contingent on your organization's policies and procedures regarding patient information and how it is to be used or disclosed.

Under ARRA HITECH, the patient has the right to ask for disclosure of their record to be restricted

from their health plan if the patient has paid for the services out of pocket. We embed capabilities to leverage existing system capabilities for disclosure management to complement the necessary policies and procedures within HIM to assure that such disclosure restrictions can be honored.

Also, as required for meaningful use Stage 1, the patient has the right to ask for an electronic copy of their record in a readable format (and as required by Stage 1 certification criteria, in the form of a structured electronic clinical document using either the HL7 Continuity of Care Document (CCD) or the ASTM Continuity of Care Record (CCR) format). Cerner supports these requirements through the use of the Clinical Document Generator (CDG) which is a common service that can be called from within PowerChart to enable a provider requested on demand generation of the CCD, from within Clinical Reporting, and through the patient portal into the electronic health record, IQHealth, where a patient can generate their own CCD if desired, and otherwise have access online into their electronic health record. Cerner also enables the CCD to be sent to the Cerner Health Record which can be made available as a personal health record (PHR) to the patient.

Cerner Millennium is based on an integrated common architecture and data structure, thus improving communication of information across the health care enterprise. Common information spans inpatient, outpatient, specialty clinics and even home care, with no redundant entry of clinical or administrative information. Any clinical information that is gathered in any care setting, from the first encounter to the last, is populated in the electronic medical record and is seamlessly integrated. Therefore, clinical data captured within various care settings is automatically and transparently accessible to the entire care team via our electronic medical record. This integrated system enables all care providers sharing a common care process to function as a team. Upon an inpatient admission, users with proper security can fluidly access any information regarding the patient's current encounter or past encounters. Similarly, if an emergency Department (ED) patient is admitted all medications and activities are available throughout your system once they are documented in the Electronic Medical Record. The record a physician views in the hospital is the exact same record in an office setting, thereby creating "one single source of truth" patient record.

Cerner Millennium software is built around the patient. The technology enables health organizations to automate clinical, financial and decision support functions on a common platform. This approach allows Cerner to infuse decision support (Executable Knowledge) throughout the care process, guiding clinicians to the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation.

For example, during order entry, Cerner's order management and decision support solution ensure that information and alerts are available to all users at the appropriate time and in the appropriate venue such as duplicate order checking, an integrated drug database, dose-range checking, and adverse drug event content. In addition, your organization can define actions required within an order, order set, or care plan such as automatically route for co-signature.

Cerner's rules engine, Discern Expert, provides a view of the big picture to make the most knowledgeable decisions. That is why Discern Expert does not just keep track of physician orders, it obtains and uses patient data from across your entire organization – lab, pharmacy, nursing, radiology – and across multiple facilities within your health care system, to provide the most accurate decision support and alerts system available. The sophisticated decision-support functionality is offered within a rules logic model and a simple and intuitive user interface design that simplifies the everyday use and management of this critical function for the organization. Alerts can be designed based on various parameters and triggers, and can be adjusted by those with appropriate security within your organization. When an order triggers an alert, the alert message

describes the potential problem and offers specific suggestions for revising the order. The alert can also prompt the clinician for more information to determine if a particular guideline applies. The clinician can review a documented explanation of the alert, select an alternative order, or override the alternative order guidelines while recording a reason. Such decision-support can reduce clinical errors, improve physicians' management of medication use, imaging studies, and lab tests, provide long-term savings by recommending preventive screenings, and track physicians' compliance.

Cerner Millennium supports interdisciplinary care and enhanced workflow options. Additionally, multiple features benefit teaching and residency programs such as the physician rounds report, easily accessible evidence-based condition- specific protocol information, and enhanced routing for supervisor signatures. Furthermore, our CareCompass provides an innovative, interdisciplinary workflow tool that guides the collaborative care team in the organization and prioritization of patient care-giving the right information at the right time. With CareCompass, clinicians see all tasks and overdue tasks are highlighted. For example, an admission assessment requiring interdisciplinary documentation and co-signature can indicate that tasks exist for the attending physician's review and signature.

The unique scalability of Cerner Millennium® allows us to connect communities and integrate healthcare on a massive scale – integration that is necessary to improve the standard of care as people increasingly move and receive treatment from multiple providers in different cities and countries. Krames Staywell instruction comes in the following languages: English, Spanish, Russian, Vietnamese, Tagalog, Chinese, Korean, Hmong, Farsi, Arabic, Portuguese and Armenian. ExitCare titles come in the following languages: English, Spanish, Russian, Vietnamese, Tagalog, Portuguese, Bosnian, and Haitian Creole. All titles may not be available in all languages. Krames provides every handout in Spanish and English. Cerner is a leader in supporting NCQA's PCMH criteria as seen by being awarded the 2008 CHIME award for enabling a medical home with the University of Missouri. Further, we have 9 clients that have achieved recognition from NCQA and many more going thru the process today.

The tracking and audit capabilities of the system are comprehensive as well as flexible. You can perform an audit trail query to access data specific to the patient's record or chart, who obtained successful access, the date and time of the attempt and information regarding the access event, including events that change or modify patient information. It should be noted that any actual change to patient data is considered part of the clinical record and the history of any such change is maintained within the patient's record.

We support incoming and outgoing HL7 ADT messaging with multiple registration systems. Each system can send individual transactions, or transactions from multiple facilities can be combined in an interface engine and sent to Cerner Millennium in one feed. We store the facility that generates the transaction.

Position-level security logic, sets permission to access an application or a task within an application, or a task group based on a user's position. Positions are defined for every user in the system.

A user is assigned to a position through the user maintenance tool. A user's position is designed to include all the tasks that might be needed to perform his or her job. Multiple users with similar job requirements can be associated with a single position, which aids in the maintenance of security profiles. Only users with appropriate privileges are granted access to the user maintenance tool.

You can perform an audit trail query to access data specific to the patient's record or chart, who obtained successful access, the date and time of the attempt and information regarding the access event, including events that change or modify patient information.

Cerner provides a comprehensive documentation solution, not specific to a particular care setting, through which direct care providers document patient care activities. We provide a catalog of forms that support documentation across multiple disciplines. Your organization can use these forms as defined or customize to meet your individual needs. The assessment forms capture appropriate data elements and can include charting by exception, predefined drop-down lists, defaulting of the last charted value, grid formats, yes/no responses, pick lists, and check boxes for point and click responses. The data elements captured can then populate the other areas of the chart. When used with Cerner Millennium's clinical systems, such as Cerner ED solution FirstNet, INet Critical Care, PathNet for lab, PharmNet for pharmacy, Clinical Office with PowerNote, Health Information Management, RadNet, and SurgiNet, the information provided by the areas employing these systems is accessible automatically and transparently to the care team member via the graphical results viewer within the electronic medical record. The clinical data repository viewer provides a cross-departmental, cross-disciplinary, person focused view of clinical information with the ability to view, endorse, and correct documentation.

Cerner Millennium is well suited for supporting pediatrics, as well as other specialties. For example, we supply pediatric documentation including growth charts and forms, notes and care plans, specifically tailored views and flowsheets, and related referential content. By infusing Cerner's solutions with pediatric specific content and capabilities, caregivers can enhance the care of children, close the research and education gap and share the expertise of the pediatric community. Some examples include: Special terminology and information includes a full pediatric lexicon that can be invoked at age appropriate times and includes developmental milestones, physical findings, social, and environmental factors. Age based normal ranges are part of our standard content. Time of birth is captured and can be used to calculate age in hours, days, months, and years. A large variety of pediatric dosing calculators exist including body surface area, body mass index, weight, age, gestational age, hepatic function, and problem and diagnosis.

Cerner Millennium aggregates clinical and financial information from a variety of sources, therefore all information, from the first encounter to the last, whether in an ambulatory or in patient setting, resides in our longitudinal relational database. Users at your organization have immediate access to the entire patient record, including information from current and past visits. For example lab results, reports of diagnostic tests, documentation, orders, and more are all viewable immediately upon entry into the system by multiple users. The record a physician views in the hospital is the exact same record in an office setting, thereby creating "one single source of truth" patient record.

Cerner's careplan solution, PowerPlan, provides clinicians with the ability to individualize diagnosis and problem-driven plans of care, including multidisciplinary clinical pathways and care protocols. Plans of care can relate to problems/diagnoses in the build tool. Once a problem or diagnoses has been documented, the system can prompt clinicians with suggested care plans to address the identified problem. The clinician can view the suggested plans of care then accept or reject the plan. The diagnosis or problem focused/driven plan can then be initiated and customized to meet the needs of the patient. In addition, an assessment with calculated results and embedded rules can trigger orders that can include an order for a plan of care.

When activated, plans of care initiate orders and orders populate the CareCompass with tasks to be completed and the MAR with medications. Clinical documentation from the CareCompass, Document in Plan tab, the MAR, as well as new results , auto update the plan of care as appropriate. The plan provides alerts with visual indicators of outcomes not met (red bold circled "X") and a green check for met. The CareCompass and MAR provide prompts and alerts associated with the plan outcomes, interventions, and indicators. Summary views provide a concise view of outcomes

indicating the patient's progress toward goals and discharge readiness. In addition, evidence links are present in outcome and intervention sections. Clicking a link takes the clinician to referential information about potential interventions to support the plan of care.

Cerner's Women's Health solution, PowerChart Maternity, provides clinicians across role and venue the ability to leverage information captured, stored and presented for review at the appropriate time for the purpose to reduce the risk of injury to the pregnant woman and her infant. The solution is integrated with the patient's medical record, condition specific, and helps automate the nursing and provider workflows. In addition, FetaLink is our software application intended to support the display needs of obstetrical clinicians through the rendering, visualization, recording, and optional storage and retrieval of fetal and maternal data acquired from fetal monitoring devices and their peripheral equipment. Cerner FetaLink also provides the capability for management of supplemental user-definable visual and audible alert thresholds. Cerner FetaLink can be used to show graphically the relationship between uterine contractions and fetal heart rate data at the bedside or at remote locations as a surveillance method. The device connectivity portion of FetaLink is the conduit through which the data flows into the FetaLink/CareAware architecture to provide the data to the application from the fetal monitor. FetaLink is dependent upon a device network infrastructure that provides fetal monitor device connectivity (CareAware iBus). In addition, if exercising the storage capabilities of the application, it is necessary to have an archival system to provide storage and retrieval of the archived records (CareAware MultiMedia Archive).

Documents such as facesheets and wristbands can be produced at admission time. The content and number of each document is customizable and can include barcoding.

Label functionality is available with Cerner's registration solution. Additionally, creating and printing labels is available with Cerner's scheduling solution with custom reporting. Customized reports can be created by your organization using the reporting tools included.

Cerner will provide you with solutions and services that enable organizational HIPAA compliance. We have taken steps to train our client-facing associates regarding HIPAA Privacy and Security requirements, and we have instituted corporate security, privacy, patient information handling, and remote access policies to support those responsibilities.

Cerner is continually developing our solutions using a solution management model approach to analyze client requests, market demands, industry standards, trends, and client feedback to define requirements and priorities for future solution enhancements. Our mobile solutions continue to evolve with focus on access to patient information, workflow and ease of use functionality, and identified clinician process models. Future enhancements and upgrades continue to be developed and released on a regular basis. We would be happy to demonstrate our current capabilities and further discuss future enhancements in the mobile access arena.

Cerner's comprehensive order management solution is one part of the Cerner approach to managing patient information effectively. Our orders solution coordinates order management and communication across all licensed, hospital-based facilities and forms the basis for Cerner's computerized provider order entry (CPOE) solution. With the physician workflow in mind, you can view existing orders and perform all order actions, such as repeating or canceling an order, without ever leaving the orders section. During the ordering process, the system performs a series of checks to evaluate for contraindications, duplication, or conflicts. When necessary, an alert will open allowing you to decide whether to continue. In combination with Cerner's pharmacy offering and nursing solutions Cerner's CPOE solution provides a powerful tool to connect the closed loop medication management process, linking physicians, nurses, and pharmacies to improve patient

safety.

Cerner Millennium solutions offer a flexible design that can be customized on three levels: system, institution, and end user. Throughout the various workflows alerts, windows, prompts, screens and data entry fields can be defined to meet your needs. For example, Cerner has developed over 500 alerts and rules in addition to documentation and reports to support evidenced-based workflows. All of the Cerner developed rules and alerts are embedded within the application, and are actionable at the point of care within the workflow of the care provider. In addition, your organization can create additional alerts and rules, as well as additional user-defined data fields to meet your documentation needs.

We provide an Advanced Growth Chart used to assess a child's development against statistical ranges of values for children of various ages, comparing the child's growth to other children of the same age. You can also use advanced growth chart to plot other developmental data such as bone age and mid-parental height. Our growth chart content is representative of the 2000 CDC growth charts. Clinicians document height, weight, and head circumference on the growth chart. The chart displays percentiles based on statistics gathered across the United States (2000 CDC statistics). The percentiles are 97%, 95%, 90%, 75%, 50%, 25%, 10%, 5%, and 3%. The patient's values are plotted against national percentiles and displayed in a linear graph format. Comparing these values to national figures can help the clinician determine how the child's development compares to normative rates of development. The charts can display values for male and female, and two different age ranges (along the x-axis): 0 to 36 months and 2 to 20 years. In addition, we provide the tanis fenton premature growth chart.

A referral to another physician can be initiated with a message sent from the Message Center if the consulting physician is a user within your organization. Due to the true integration of Cerner Millennium, the appropriate referral forms can be forwarded to physicians within your organization. As a result, the consulting physician is able to use order entry functionality to generate any orders. A subsequent letter can be sent back to the primary care physician with documentation of the encounter. Users can also create referral letters that can be printed and sent to outside clinicians.

2.1.4 REGISTRATION REQUIREMENTS

Provide Proposer's detailed description of how its proposed EHR System meets the needs of DHS for registration, pursuant to Section 1.4 (Registration Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's registration solution is an online Admit-Discharge-Transfer (ADT) system for automating the workflow and process of registration, admitting, transfers, and discharges in any clinical domain, including hospitals, physician offices, and clinics. Cerner registration solution creates the encounter and a Cerner Enterprise Master Person Index (EMPI) that become the basis for coordinating the person's movement across an integrated or disparate health system.

Within Cerner's registration solution, each person entering the healthcare system is automatically assigned a lifetime medical record number (MRN), or "account" number.

All persons added to the system are added to the Cerner Enterprise Master Person Index. This includes next-of-kin, guarantors, subscribers, and emergency contacts. All visit activity has a relationship to a record within the Cerner Enterprise Master Person Index. The Cerner Enterprise Master Person Index can be used as the foundation of each encounter. The Cerner Enterprise Master Person Index information captured within Cerner's registration solution is the same data used

throughout Cerner Millennium. Modifications within Cerner's registration solution are immediately viewable within such Cerner solutions as PowerChart, Cerner Order Management, and Cerner Scheduling Management.

Cerner's registration solution provides multiple rules functionality options, as follows: interfield rule; finish level rule; start rule. Within Cerner's registration solution, an interfield rule is a rule that is placed behind a particular prompt in the registration conversation, for example behind the date of birth prompt. A finish level rule is placed at the end of the registration conversation and it is activated when OK is selected to save the data. A start level rule is placed at the beginning of the registration conversation (before any prompts) and activates as the conversation is opening.

Customized registration screens enable you to enter insurance plan information at both the person and encounter levels. Insurance data can be gathered at the person level, which is the starting point for visits to facilities within the enterprise. Up to six subscriber insurance plans can be captured per person and per encounter.

Employment and plan sponsor information can be entered into the database to expedite billing and reimbursement. The Insurance tool provided allows you to enter health plan information for insurance organizations and associate those health plans with sponsors (employers).

Membership uploads can be performed with payer-provided information to assign relationships between persons and their health plans.

Label functionality is available with Cerner's registration solution. Additionally, creating and printing labels is available with Cerner's scheduling solution with custom reporting. Customized reports can be created by your organization using the reporting tools included.

Documents such as facesheets and wristbands can be produced at admission time. Standard documents/reports are available. Additionally, the content and number of each document is customizable and can include bar coding. Admission, transfer, and discharge notices can be produced at the time of admission/transfer/discharge.

Cerner's registration solution supports the modification of an encounter type through the utilization of various screen types that automate tasks or ADT transactions. Your organization can configure screens that perform additions/updates to encounters.

The pre-registration (pre-admission) conversation functionality provides the ability to gather and verify the minimum required information prior to booking an appointment or non-scheduled encounter.

Cerner's registration solution provides an Episode Manager tool that is used to group related encounters in an episode type. The grouping of encounters makes it easier to view registration information for a particular course of treatment. You can add an episode type and include encounters in it or give a new name to an existing episode type. An encounter can be moved from one episode type to another episode type or designated as an unattached encounter. If an episode type is deleted, its encounters display in a list of unattached encounters.

Cerner's registration solution screen building tool supports the creation of a quick registration with minimal required fields.

With the implementation of Cerner's Master Person Index solution, the Combine tool's online work queue includes a percent column, which reflects the probability that two people in the queue are a match. You can manually display potential duplicates side by side to review what information is the same and what information is different. Potential duplicates that meet the report threshold are written to the appropriate database table. The system reads this table to populate the work queue.

The Combine Tool that is provided is used to eliminate duplicate records by combining persons and encounters in the database. You can also separate (un-combine) person and encounter records that were combined in error. Combine also provides the ability to remove a single encounter from one person's record and add it to another person's record. This can be necessary if an encounter was mistakenly assigned to the wrong person.

Cerner's registration solution work queue manager is used to build worklists to aid in task management. This application allows you to create a worklist, which is launched out of the Access Management Office application. The worklists can be built as a simple task list, an associated conversation, or as a list only. The simple task list has the ability for a custom update script to be created by your organization to perform an update in the database when an item on the worklist is selected. The associated conversation allows a registration conversation to be launched from the worklist which in turn allows you to modify the visit or person information. A list-only worklist provides the ability to drop the row off of the query upon selection; thereby performing a database update.

Ad hoc filtering functionality is also available during the build process of the worklists. Ad hoc filtering allows you to designate a specific field value, date, location, organization, person, provider, or text to be filtered upon.

The tasks in the work queues are automatically assigned task numbers. The numbers can then be used to grant or restrict access to a task in the Task Access application. You can select a worklist and then launch an application to perform appropriate transactions for a selected person or item. List-only work queues can also be created. These work queues do not require that you launch an application to perform a task.

Cerner's registration solution provides an encounter location history viewer which provides the ability to view admit, transfer, and discharge history for a person's visit. Cerner's registration solution also provides the ability to display the temporary/current location as well as assigned location via a column in the bed board. The historical tracking of the temporary location is provided within the History Maintenance module.

Additionally, within Cerner's Bed Board application or a registration conversation, the ability to assign or remove the assignment of a temporary location to a person is supported. Within the Bed Board, the person displays in the assigned nurse unit/room/bed. A temporary location column is available that can be added as a bed board column to view the temporary location of the person. Additionally, your organization can define a user-defined field to designate the status of the person. User-defined fields can also be added as bed board columns. In reference to tracking persons from pre-admission to discharge, the location history is viewable for the person in the Location History tool or using the History Maintenance module in Access Office. The dirty bed worklist can be used monitor bed statuses. Additionally, within Cerner's scheduling solution, the check-in, check-out, and person wait time is provided to assist with person tracking functionality.

Cerner's registration and benefit solutions provide easy-to-use, front-end tools that can be used to create the reference database for insurance carriers, health plans, and benefits. Within the tools provided the information is as easy to modify as it is to build. For example, if a payer makes some type of change (i.e. change in phone number) you can access the specific tool for that information and make the change accordingly.

2.1.5 SCHEDULING REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for scheduling, pursuant to Section 1.5 (Scheduling Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner Scheduling Management coordinates appointment scheduling across an integrated or disparate health system. It is used to establish and maintain person appointments for resources with defined availability.

Protocol appointment types can be defined to allow you to schedule one appointment type that in turn schedules multiple appointments with predefined time ranges separating them.

Appointment types include recurring. You define the sequence and the number of instances needed for the appointment. The system automatically calculates the appropriate days based on entered data.

Group scheduling functionality provides the ability to schedule and specify the number of persons to be scheduled for a specific appointment type.

Within Cerner's scheduling solution, CPT 4 codes can be associated to the appointment type or orderable as part of the database build. During scheduling the user can then enter the appropriate IDC9/10 diagnosis.

Integration between Cerner applications is seamless.

Cerner's scheduling solution supports the ability to define data fields to capture appointment specific information. This information can be defined by department or specialty.

Client-defined preparations and post appointment instructions can be associated to appointment types.

Scheduling guidelines are guidelines that are displayed to users during various stages of the scheduling process such as confirm, reschedule, and cancel.

The flexing functionality provided allows you to define rules at the appointment type, resource, orders, and slot type level. These rules are evaluated to determine how appointments should be scheduled in certain circumstances. Appointment details captured are flexed due to the accept format associated. The ability to define different fields for inclusion is supported. The accept format can be defined at the appointment level or various scheduling actions, allowing for the same accept format to be flexed to display different fields based upon the scheduling action for the appointment type. We do not limit the number of details that can be present on an accept format. Most clients average between 3-5. We recommend you add the amount needed to be able to book appropriately without impacting the users workflow.

Cerner's benefits solution maintains the terms and conditions of relationships among members, employers, providers, and payers to enable integration of these relationships within clinical and financial processes. This solution manages information related to insurance plans and member demographics, EDI eligibility verification, detailed coverage and benefit information, and referral and authorization management for members and provider networking. Cerner's benefits solution includes Cerner's eligibility solution, which provides the initiation and storage of the Electronic Data Interchange (EDI) for specific and relative information related to the health plan. An EDI transaction is sent via the Cerner application to a third party clearinghouse in order to capture the health plan eligibility verification information. The status of the verification is returned as part of the appropriate application and is displayed and stored for reference. History, audit and reporting tools are available as applicable within each application.

Within Cerner's scheduling solution, CPT 4 codes are associated to the appointment type or orderable as part of the build. The user can then enter the appropriate IDC9/10 diagnosis when entering the information specific to the patient and appointment. With this information, the system can perform a medical necessity check using 3M's Medicare Medical Necessity content. The content contains the Local Medical Review Policies (LMRP) and the National Coverage Determinations (NCD). As part of the workflow, the user is notified if an Advance Beneficiary Notification (ABN) is required to be signed. The user has the option to print the ABN form immediately or to print the ABN form at a later time in the process, from Cerner's scheduling solution. All appointments that require an ABN can have an icon displayed or users can view from a worklist. We also offer a standalone Medical Necessity Checking Tool that allows the user to enter the diagnosis and procedure codes to be checked against the 3M Medical Necessity Content. The ABN form can also be printed from this standalone tool.

Each appointment type is associated with an unlimited number of schedulable resources (person, place, or thing, including patient). The system automatically takes into account the availability of each of the resources when determining if the appointment can be scheduled at the requested time.Tight integration of Cerner's scheduling solution with underlying Cerner applications ensures optimum use of resources and promotes patient satisfaction with timely, sequenced care. Costs are reduced, since coordinated scheduling ensures proper resource utilization.

Revenues can be increased, because streamlined scheduling increases operational efficiencies and patient throughput, freeing up more time in the day to schedule additional appointments.

Cerner supports 5,000+ default schedules. The number of default schedules recommended is dependent on how your organization defines other scheduling factors such as slot types, appointment types, and locations for clinics. The more these factors are individualized, the more default schedules are potentially needed. Your organization can define and build a virtually unlimited number of schedule templates for individual resources, or one template can be used for multiple resources. A schedule template is made up of slots of time that are applied to a day or range of days. Schedule templates can be created by facility for resources and procedures.

Limitations to resources created is applicable if a resource is built but then not properly associated to a resource role, without the role present the resource cannot be scheduled.

Resource roles are typically based on the clinic type or service as a starting point for the grouping. The same resource can be associated to many different resource roles. Based on the statistics provided, we would recommend your organization have 100+ resource roles defined.

Reception module in Cerner is a combination of Departmental Order Entry (DOE) for managing direct attenders and the Scheduling day book to view daylists and arrive scheduled patients as they attend. Both applications are available to the receptionist through a single sign-on using the App Bar. The App Bar allows the receptionist, and all users, to have all the functions they require through a single click, with no need to re-logon each time. DOE supports procedure order entry and review functionality. The functions provided help you accomplish the following tasks:

- Admit a patient and order procedures using a single function.
- Place orders and request additional procedures.
- Cancel procedures.
- List each patient's ordered procedures, exam status, and patient, order, or result comments.
- Scan any paper documents related to the patients attendance.

The Appointment book provides the receptionist with a graphical day book, displaying current patient status and other details as defined locally. Day book views are defined locally and can be for single locations/resources, groups of locations/resources or all locations/resources. The receptionist can arrive the patient directly from the graphical view indicating electronically to the radiographer that the patient has arrived and is ready for their procedure.

Cerner's perioperative solution also includes an integrated scheduling component that shares the same database and architecture as all Cerner Millennium solutions. Surgery scheduling performs conflict checking on all schedulable resources for the appointment. With block scheduling capabilities, you can define blocks of time that particular resources and appointments can be scheduled into. These blocks can be defined at the surgeon, surgeon group, patient type, procedure, and/or specialty/service levels. Blocks can be layered and automatically released at user-defined points in time to another block, or to open scheduling. We also provide detailed reporting to analyze block utilization. Other surgery scheduling features include automatic case-duration calculation based on historical case information, request list capabilities, suggestions for appointment times, appointment notifications, and linked appointments. Surgical preference cards are surgeon/procedure-specific and store items needed for the procedure, as well as procedure-specific documentation templates and defined defaults. During scheduling, the surgical case number is automatically created, and the appropriate preference card is assigned based on the surgeon and procedure selected. Since the surgical items and documentation templates/defaults are included on the preference card, the case-specific pick list and needed documentation automatically pull into the case, where the nurse can edit/complete by exception.

2.1.6 CLINICAL DOCUMENTATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Clinical Documentation, pursuant to Section 1.6 (Scheduling Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

PowerChart is a family of system solutions for a wide assortment of health care providers designed to automate care delivery. As an electronic medical record system, PowerChart supports enterprise-wide viewing of clinical information. Cerner Millennium solutions create a single source of truth for the entire care delivery team providing real-time access to the same information regardless of role, venue or condition. As a result, we are able to support the full scope of practice for each clinician with automated protocols, optimize handoffs from clinician to clinician, venue to venue, as well as meet quality and regulatory requirements captured as a natural by-product of documentation. It includes process automation functions for viewing clinical information and activities from any department or system; ordering of nursing or multidisciplinary care team procedures; clinical documentation in forms-based, template, or free-text and structured-text approaches; and coordinated care pathways. In addition, entry of demographic and visit data can be made using a basic patient registration function. PowerChart and its related solutions can automate many tasks associated with providing optimal patient care. PowerChart automates the processes necessary to coordinate patient care and document at the point in which it was delivered in both acute inpatient and outpatient settings.

Our comprehensive documentation management solution is designed to automate discrete data documentation related to care delivery anywhere within a health system. This includes information obtained from the delivery of care documented in such forms as textual documents, vital signs,

assessments, height, and weight. Cerner provides a library of standard documentation forms, interactive views, notes, and templates which can be modified by your organization. As orders, results, and documentation are completed in the system, task lists and workflow views are updated appropriately. Our interdisciplinary workflow tool guides collaboration and provides clinicians a face-up view of critical patient information, patient status, and activity data with both a single patient and multi-patient context in order to proactively manage patient care. As a result, communication is enhanced, redundant charting is eliminated, pertinent results are integrated into documentation, charting standards are upheld, and quality of care is improved while errors are reduced.

Various methods of viewing results are available; the Patient List, Order details, the Chart Summary, the Message Center, the Electronic Medication Administration Record, flowsheets such as I&O, and clinical notes. The results viewing process is designed to provide the clinician with the most pertinent results first. The care provider then can seek additional results if necessary. New, as well as abnormal results can be defined to prompt clinicians and the appropriate task lists updated. Cerner Millennium can also integrate with mobile devices. Our solution is device agnostic based on virtualization capabilities. As long as the device is adequately configured for processor speed, memory requirements and screen resolution for example, you can run Cerner Millennium applications.

Health care is complex and demands multidimensional coordination, communication and collaboration across the care delivery team. Our system can support the charting, viewing, ordering, and care planning/pathway needs of the multiple specialties within your organization. You can define custom flowsheets, online forms, clinical note templates, plans, and pathways to meet the specific needs of the various specialties. The system provides the flexibility to completely customize your order catalog to accommodate all the areas or departments within your organization. Multiple views/screen formats can be customized for departments, units, providers, specialties, and more.

For example, the flowsheet allows clinicians of all specialties to efficiently review result data and documents from Cerner's integrated clinical systems as well as interfaced foreign systems within a single spreadsheet view as soon as they are recorded. A virtually unlimited number of online flowsheets can be designed for use in different specialty areas and can include any or all data or a select subset of the data captured. Flexible display features allow you to create an optimal view. You can select the format of the flowsheet interactively, maximizing the communications of information to the clinician as appropriate for a given clinician and patient.

The Cerner solution provides an online problem list, representing the patient's lifetime problems which are maintained across the network, and can include diagnoses, conditions, and anything that presents as a problem to the patient's overall health. Problems are codified and include the nature of the problem, its status, onset and duration. Database links to the associated clinical events provide detailed documentation of the basis and course of a specific problem. Problem list information is collected and entered into the system within the problem list view which can be embedded into documentation templates.

The Cerner solutions provide a wealth and variety of standard reports such as Active Orders, All Tasks, and I&O's to name a few. In addition, your organization can also define and build a virtually unlimited number of Discern Explorer reports to report on any discrete data captured in the Clinical Data Repository.

Cerner Millennium offers cross-discipline shared servers for registration, scheduling, ordering, results, documentation and charging that eliminates duplication, leverages processing power across the organization, and allows flexibility to meet the demands of departments. For example, charges can be dropped based upon order placement and documentation. Charge capture can occur at order

entry, collection, order completion, task completion, result entry, and at the result or observation level in documentation. You can easily retrieve online charge information through the Charge Viewer.

2.1.7 ORDER MANAGEMENT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Order Management, pursuant to Section 1.7 (Order Management Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner Millennium includes not only the Clinical Data Repository, but also the viewer into each patient's electronic medical record. Cerner's EMR includes familiar views containing functions such as the patient demographics view, growth chart view, Message Center, flowsheet, patient list, multipatient task list, and various summary and workflow views. By using additional Cerner Millennium solutions, corresponding views are added to the EMR viewer. For example, the addition of Power Note, order management, and documentation functionality adds views to support order entry, forms and notes documentation, and the MAR. Whether the clinician is in an inpatient or ambulatory venue, they simply click the view corresponding to the function they desire, or set default views. Furthermore, you can create meaningful views of information to support the vast needs of all types of roles, areas, and user level preferences. Much of our development efforts have focused on providing clinician views that support workflow processes. Summary screens, predefined views, flowsheets, patient lists, Message Center, orders, interactive view, structured documentation templates, pathways, problem list, clinical, documentation forms, clinical summary and task list are all examples of views that can be customized by area and/ or role to meet your needs. Flexible display features and a multitude of viewing and navigation preferences can be utilized to maximize the communication of information to the clinician, both as predefined views as well as interactively during real-time record viewing.

These multiple views/screen formats can be customized for departments, units, providers, and specialties. Your organization can determine which views are available to each clinician by position. If your organization wants to restrict clinician access, you can set that position security to not include those views. For example, clinical results views can be customized to display the most pertinent results first within various formats such as flowsheets, patient list, order details, chart summary, Message Center, MAR, I&O flowsheet, and clinical notes. These customized summary views and custom flowsheets can be defined to meet the needs of various workflows within your organization.

Cerner's orders management solution coordinates communication and order management across the continuum of care and across facilities and was tailored specifically with physician and clinicians workflow in mind. It forms the basis for Cerner's computerized provider order entry (CPOE) solution. Along with physicians, other care providers including nurses, clerks and other clinicians are able to support order entry, review, validation, interdepartmental communication, inquiry, and reporting of clinical orders.

Our order management solution addresses the needs of each of your clinical roles and can be utilized for patient ordering needs across all venues of care-Inpatient, Ambulatory-In Office, and Prescriptions. PowerOrders presents a view of the ordering process in a display similar to the Flowsheet and also handles medications, dose range checking, and continuous infusion orders. Order modifications are streamlined with an edit-on-the-line feature and patient allergies and diagnoses

can be accessed from the order window.

Providers can review, validate, inquire, and report on clinical orders based on security. It allows physicians and other clinicians to place new orders, suspend/resume orders, view existing orders, modify, review, renew, and cosign orders. Many convenient timesaving features are provided, including pre-built order sentences, favorite orders folders, and linked reference text. During the ordering conversation, the clinician has the ability to see relevant data from the repository within the order entry screen. The point and click ease of ordering and viewing enables providers to spend less time with the patient chart and more time providing care. Task lists and orders queues are updated real-time as new orders are posted and new results become available. They will be posted in the applicable views, worklists, and flowsheets.

Our CPOE solution ensures that information and alerts are available to all users at the appropriate time and in the appropriate venue. Information entered "downstream" (as well as information written to the patient's record from previous visits) is available to the departmental user, helping that user make the best and most-informed decisions possible. For example, the pharmacist can view clinical notes and laboratory results directly from the pharmacy system and in appropriate workflows.

Cerner's decision support solution, Discern Expert, can look across multiple workflow environments. Our rules engine can interact with orders, documentation, pharmacy, laboratory, radiology, surgery, cardiology, registration, scheduling and other ancillary environments. Cerner's decision support tools are not limited by patient type. Data can be evaluated across encounters including inpatient, outpatient, and any of your facilities or locations providing clinicians with feedback inside and outside of the ordering process.

During installation, orderables are entered into the build spreadsheet and imported. Also, a standard order catalog is provided by Cerner and can be uploaded to your system. With Order Catalog Tool, you can add new orderables, modify existing orderables, and make batch changes to sets of orderables. To speed the process, you can copy the parameters for a previously defined orderable into a new orderable and then make necessary changes. Your organization can use the tools to tailor a virtually unlimited amount of orders to meet the needs of all clinical settings within your organization.

2.1.8 CLINICAL DECISION SUPPORT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Clinical Decision Support, pursuant to Section 1.8 (Clinical Decision Support Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner Millennium solutions feature clinical decision support throughout the continuum of care. With our knowledge solutions we provide the most current and relevant medical decision support, which is embedded in the actual workflow of providers and clinicians from the very first assessment, placing content-based on the latest clinical evidence, empirical data, and optimal practices at the clinician's fingertips at the appropriate time and place in the care process.

Alerts, reminders, and other decisions are built into each Cerner solution where they make the most sense, such as duplicate order checking, abnormal results indicators, immunization reminders, or auto verification, to name a few. Utilizing Discern Expert, specific patient parameters and events can

trigger and fire notifications which can prompt clinicians with guidance and/or to enable intervention. In addition, your organization can use Discern Expert to easily write additional rules to meet your needs.

Consult orders can allow a clinician to place an order and direct it to a specific medical service. Clinicians associated with that medical service can view the list of consult and accept if applicable. In addition, clinicians have the ability to forward results and documents to support consult request to clinicians. These requests appear in the Message Center.

Our clients have also used our solutions to improve the quality of care, costs and lives of the rapidly growing number of individuals with chronic illnesses. As such, our solutions include condition summary screens, which present the user with contextual summaries and evidence-based treatment algorithms based on the patient's condition. Our solutions also provide population and provider performance reports that aggregate performance metrics. These measures help physicians compare and improve their individual clinical performance against standardized performance targets and peers' performance. We are helping our clients improve care for these patients by drawing on the information doctors and nurses put into the EMR and comparing the care provided against quality measures from nationally recognized organizations such as the National Center for Quality Assurance.

Advisors (interactive reports) have been developed for VAP, BSI, UTI, and SSI. Much of the content on these advisors are extracted from the Cerner Millennium platform and follow the algorithms as defined by the CDC and NHSN. Infection Control has four Advisors which follow CDC and NHSN guidelines for Urinary tract infections, Blood stream (Central Line) infections, Pneumonia (VAP), and Surgical Site infections. Advisors help guide the clinician by extracting objective data from Cerner Millennium and allow the end user to fill in the subjective data to arrive at a final conclusion. Once completed, the clinical data documented within the Advisor can be saved as a CSV file for upload to agencies such as NHSN.

With our Core Measures solutions, data elements that can be discretely identified within your system will populate based on normal, everyday workflow, eliminating redundant documentation. Outcome measures are then available in real-time at the patient level, within the Quality Measures PowerPlan, or at the population level, within the Quality Measures MPage. Our solutions offer Web-based reporting screens and summary reports within an intuitive graphical interface. Additionally, content and reporting packages are updated in alignment with the CMS/TJC and Meaningful Use versions as mandated by the individual reporting programs.

2.1.9 PHARMACY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Pharmacy, pursuant to Section 1.9 (Pharmacy Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's Clinical Data Repository (CDR) contains patient demographic and clinical data in a single, consolidated longitudinal electronic medical record. In our PharmNet Inpatient Pharmacy solution, lab values are available automatically in the results tab with integration to our lab solution, or via an HL7 interface to a foreign lab system. You can define how lab values show by flagging them in different colors, or by letters H, L or C (High, Low, or Critical), or both.

Our pharmacy solution stores all medication history from previous encounters, which can be viewed

via a history action. The clinical documentation feature provides for more thorough and complete documentation of clinical notes, task lists, and activities within the pharmacy department. The medication profile is updated real time with medication orders captured by history on admission, as well as outpatient prescriptions and inpatient orders. The medication history is viewable at any point by all authorized users. Our pharmacy solution supports TallMan lettering for look alike, sound alike drugs, using MediSource which has certain medications recommended for TallMan. Dose range checking content is provided by MediSource, and can be customized to meet your unique practice standards. Customization supports adjusting the safe minimum and maximum dosage range at the specific generic drug, age and route of administration context. Cumulative Lifetime dose range checking provides system-automated verification that the dose you are ordering will not result in the patient receiving excessive amounts of meds. Cumulative dosing is calculated based on dispensed doses from PharmNet, documented medication administration from Cerner's electronic medical record, or documented therapy received outside of the Cerner system. Pharmacists have full access to documentation of allergies, which can be viewed in all Cerner Millennium solutions. PharmNet supports allergy checking and notices. When appropriate, a system-generated alert will display on the user screen during order entry. Hard and soft stops built at the orderable level present clinicians with visual notification in our orders solution that the order is reaching its stop date/time. If a hard stop order is not renewed prior to its stop date/time, the order is discontinued. A soft stop continues past its stop date/time. Controlled substances are included in the formulary. There are multiple standard management reports that offer reporting of user-defined parameters to provide data including medication utilization. Also, Discern Analytics reports allow you to create ad hoc reports for medication utilization.

PharmNet's order entry determines if another user is accessing the medication profile. If not, you are granted the record lock when the patient is selected. This is not an order specific lock, as any other orders, if changed, can have a negative clinical impact on the order being acted upon without the clinician's knowledge. In the clinical data repository, you can perform other actions in the chart and place orders for other catalog types. If you initiate an order while the profile is locked by the pharmacy user, you receive a warning and, based on preference, can proceed. If physicians have initiated medications orders, they are granted the medication lock until signed. The pharmacist, upon selection of a patient which is locked, is notified medication orders are being added by another user. The message indicates who the other user is, and the remaining time on a client defined lock expiration setting. Pharmacists can inquire on any details without affecting the lock, or based on security, break the lock to begin entering orders. Pharmacy order entry locks when the patient is selected and releases the lock when leaving the patient record as the workflow in MedManager is related to medications. The clinical data repository does not lock the patient until a medication order is initiated, at which time the lock is attempted to be acquired.

IV charting is provided with the our eMAR. Multiple ingredient IVs are available. TPNs are built as order sets and can be loaded in PharmNet after calculations are done. Our pharmacy solution supports performing an IV compatibility check of the ingredients being added into the same multi-ingredient IV order at the time or order entry. IV compatibility checking is performed as part of the clinical checking and decision support process using King's content. Checking is done on drug/drug and drug/diluents pairs. Interaction information is displayed, along with other reference information pertinent to the medication and administration. Order changes are reflected on the eMAR and activities list in real time. Patient medication leaflets are provided with our MediSource database. You can enter orders as a template non-formulary item, which allows you to free text any item in.

For a medication orderable synonym, you can select a specific Rx mask based on options defined for

the synonym in Order Catalog Tool. Selection of an Rx mask defines its medication type and prevents the front-end application from prompting for this information later. Virtual View settings determine which synonyms are visible in order management. Via Virtual View, Tylenol, for example, can be visible in Facility A, but not Facility B.

Your organization defines when in the life of the order a charge is posted. You can generate a charge on order, and credit the charge if the order is canceled. Charges can be captured upon medication dispense or medication administration.

The medication list contains a patient's current and past med orders. Using headings, columns, symbols, and brief descriptions, the medication profile provides a quick, in-line summary of essential information about each order. The medication list view is divided into three categories, each of which is identified by a heading: pending, medications being given, and prescriptions/home medications. The latter two categories are divided into current and past subcategories. Arranged in a tree format, each category and subcategory can be expanded or collapsed, allowing you to see order details as needed. The orders view is used to place new orders, view existing orders, renew, modify, review, cosign orders and generally work with various types of orders, such as sliding scale orders, weight based orders, medication orders and more. The three main sections of the orders view are the Navigator, the Order Profile, the Order History and Medication Reconciliation area. Our orders solution provides robust medical student order entry functionality. Prior to placing any order, the medical student is prompted to enter a physician's name (who receives the prompt to sign the orders). The orders can then be held in the solution until the physician co-signs the orders. These orders can be seen in the orders profile view as "held pending signature". The orders are automatically routed to the "signing" physician's message center/review queue. Once the orders are signed, they are automatically processed.

Dose calculator functionality and dose range checking provide a safe and effective check for dosing medications. Comments can be defined and presented during an under or overdose alert message. Cerner supports dose range checking based on age, weight, body surface area, and renal function. Dose range checking functionality, validates single dose, daily dose, therapy limit dosing, continuous infusion additive-rate checking, renal dysfunction checking and lifetime burden checking for medications with a literature published lifetime burden. Also, dose range checking parameters include gestational age-based dose range checking, hepatic dysfunction and problem/diagnosis dose range checking. Discern Expert rules validate that patients have a height, weight or allergies entered. The most recent values for height, weight, and serum creatinine are viewable from the order profile, and are used by the system for dose range checking, dose calculations, and calculation of BSA, IBW and CRCL values. Result date, time, and method of calculation are available. Dose range checking supports renal checking against Creatinine Clearance estimated from a Serum Creatinine result. When ordering renally excreted, or nephrotoxic medication for a patient with a recent creatinine result that indicates impaired renal function, a dosage adjustment is recommended. An alert evokes when a renally excreted drug is ordered. Recent lab results are checked for low creatinine clearance levels. This rule is done assuming capturing height in centimeters. The Cockroft/Gault formula is used for patients between the ages of 18 and 92 years, and the Schwartz formula is used for patients between 6 months and 20 years of age. Our pharmacy and rules catalog provides Standard IV/PO WBC Switch. This rule recommends a switch from an expensive IV medication to a more cost effective oral equivalent. Documents such as facesheets, labels, and wristbands can be produced at admission and can include barcoding. Please refer to the Additional Reference Materials section for examples of barcodes.

2.1.10 MEDICATION ADMINISTRATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Medication Administration, pursuant to Section 1.10 (Medication Administration Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner Millennium Medication Reconciliation supports identifying the most accurate list of all medications that a patient is taking - including the name, dosage, frequency, and route- and using this list to provide correct medications for patients anywhere in the health care system. Our reconciliation process involves comparing the patient's current list of medications against the physician's admission, transfer, and or discharge orders. During each transition from one venue to another, clinicians should review previous medication orders alongside new orders and plans for care, and reconcile any differences.

Central to the reconciliation process we provide a single source of up-to-date medications with all necessary order details. An efficient process is also very important. Our tools support reconciliation of current medications and addition of new medication orders within the same screen or user interface. Cerner Millennium supports the medication reconciliation process for all transition types during an encounter; admission, transfer or discharge.

Cerner's medication reconciliation is an enhanced way for physicians and clinicians to document patient medication history and reconciliation. The components include documented medications by history, admission, transfer and discharge medication reconciliation. We provide prescription actions such as convert to inpatient and convert to prescription within the reconciliation window as well as a view of therapeutic alternative selection. Specific functionality includes the ability to:

- Receive automatic notifications (through tasks) when patients' medication histories have not been completed.
- See when and by whom a patient's medication history was last updated for a given encounter and view when a patient's medication history has not been completed for a given encounter from the order profile's medication list.
- Define whether a patient's medication history is considered complete, including active and inactive medications based on documented medications and their respective compliance.
- Document when there are no changes to a patient's medication history and compliance
- Reconcile medications upon admission, transfer, and discharge of patients
- Add orders for medication reconciliation
- Select therapeutic alternatives
- Convert medications to inpatient administration orders (active or inactive)
- Convert inpatient medications to prescription orders (active or inactive)
- Add and search for Care Plans

Our orders display in the reconciliation process with the order status such as ordered, suspended, incomplete, cancelled, discontinued, completed, pending complete, voided with results, and cancelled to easily recognize if the medication needs to be continued upon transfer or discharge.

2.1.11 LABORATORY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Laboratory, pursuant to Section 1.11 (Laboratory Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

The major components of the PathNet product line address the clinical information needs of the various laboratory sections and include General Laboratory, Microbiology, Blood Bank Transfusion, Anatomic Pathology, HLA and Outreach Services. Since its market introduction, PathNet has attained significant success in the marketplace, and is recognized as the industry's leading LIS. Based on its robust functionality, PathNet provides benefits for integrated health organizations as well as clinics, commercial laboratories, and hospital groups worldwide.

Our clinical solutions continue to evolve with focus on workflow and ease of use functionality, and identified laboratory business process models. The Cerner PathNet laboratory information system offers clinicians comprehensive, fully integrated technology to automate the operational and managerial sides of the laboratory, and because the PathNet family of solutions operates on the unified Cerner Millennium architecture, information links seamlessly with the patient's electronic medical record.

Clinical and laboratory data can be charted in our solutions. With our single data structure, Cerner Millennium provides real-time access to all charted information across multiple applications, such as laboratory, pharmacy, nursing and physicians, to all of those needing such access, regardless of location.

All results are associated to the order set. For example, a CBC can have results for hemoglobin, hematocrit, wbc, rbc, and more. All of these results can be associated to the one order (CBC).

Microbiology results display within Cerner's micro viewer, which includes a susceptibilities grid format view of the organism and related drug susceptibilities. Depending on the types of tests performed by the lab, the results are listed in columns. The result indicators can be defined by your organization. Some examples include these common symbols: R = Resistant, S = Susceptible, and I = Intermediate.

Your organization can define rules that can trigger an order based off of the positive result.

2.1.12 RADIOLOGY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Radiology, pursuant to Section 1.12 (Radiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's RIS system, RadNet, streamlines departmental operations, such as registration, order entry, patient tracking, film tracking, transcription, electronic signatures and report distribution. Pertinent data, such as allergy information or lab values, is available to radiology staff at the click of a mouse. In addition, RadNet provides unparalleled efficiency in exam scheduling and ICD correlation, as well as tools to streamline documentation, optimizing revenues and profitability. Our integrated solutions provide the ability to work with multiple modalities and worklist to enhance the workflow of the technician as well as the provider. We support the work flows as mentioned, CAT SCAN; Ultrasound; Nuclear Medicine; General Radiology; Mammography; Cardiology; and MRI. The scheduling

capabilities include reason for exam as well as cancellation with reason and the ability to schedule/reschedule multiple resources, and exams in the appropriate order and time span. Orders can include reference text as well as links to your specific reference sites. In addition, we support technical comments and the ability to capture that section on reports as well as in our chart search capabilities. Provided adverse reactions are documented in our allergy and adverse reaction module, our system can check radiology orders against the recorded information as well as perform MediSource interaction checking. Your radiology staff can access the allergy/Adverse Reaction module to view, edit , and add reactions depending on assigned security. All medications ordered in the radiology module can appear on the MAR and be documented as administered on the MAR. Our integrated orders provide one source of truth for placing all orders, interaction checking, and integration with the MAR.

Technical comments is an open-ended data collection online form that allows you to define what data is collected and provides control over the formatting of the data. Data entered can be included within the exam report.

Reports providing volume, utilization, and performance statistics are available to department managers to assist in planning and management of the radiology department. These reports provide the means of evaluating the performance statistics within and across the entities of the organization, such as institution, department, and section-level comparisons.

The following is a list of reports you can create easily using the inherent Discern Analytics tool.

Actual turnaround time log, Turnaround time report, Exam activity report, Order activity report, Detail activity report, Transcriptionist activity report, Procedure classification report, Repeat analysis report, Medication documentation report, Technical comments report, Mammography report, Workload report, Canceled Exam Report, Wet Read Report, Peer Review Report

The trending functionality within our reporting tool, allows long or short-term trends to be easily identified and analyzed. Discern Analytics also includes the ability to graph statistical information into numerous graphing styles allowing for quick analysis of volume and turnaround time information. You can save these reports for future use.

In the area of patient outcomes, radiology usually contributes data to a health system-wide plan for evaluating outcomes. Cerner's radiology solution offers mammography statistical reports that give outcome statistics by radiologist, and patient age group. The standard indicators are true/false positive/negatives, accuracy, sensitivity, and specificity.

Mammography management is an integral part of the RadNet solution that prevents patients from being lost to follow up, as well as ensuring the specific data collection requirements are met. Follow-up case records are created in RadNet each time a technologist completes a mammography procedure. This eliminates interfaces or dual maintenance of separate databases that can lead to delayed results or lost cases. Data collection can be performed at the time the procedure is completed, at the time of transcription, and at electronic signature by the radiologist. Historical patient medical information is transferred from one visit to the next to eliminate re-entry. Online breast diagram is available to record annotations and study-specific markings. The technologist only needs to enter the information that has changed since the patient's last visit. RadNet's Mammography application provides for patient notification and follow up, medical outcome reporting and Discern Analytics reporting for all BI-RAD codes as well as any client-defined data elements. Overall Breast Composition information and all Required MQSA data exists in the Study tab of the Mammography Case Maintenance window.

When a patient returns for follow-up exams, the system creates a new follow-up period. Data

exchange is transparent across every institution in a multi-facility setting. Access to all previous results and statistical fields is available to the technologist, transcriptionist, and radiologist.

Number of biopsies recommended, number of biopsies performed, number of cancers found, biopsy yield of malignancy, and cancer detection rate are all statistical report fields that can be reported by individual radiologist, all radiologists, and patient age group.

The following reports are available with mammography management:

Follow-up reports, Assessment by patient age group report, Recommendation by patient age group report, Outcome summary report, Summary report by radiologist report, Follow up reports, Assignment based on Pathology Information, Standard Management Report

The Cerner RIS provides for the scheduling of patients, exam rooms, and equipment, as well as the personnel needed to perform the exam. The scheduling system provides interaction or conflict checking, and procedure sequencing to ensure that all procedures are performed in a safe manner. Online inquiries and reports are provided by department, section, exam room, procedure, and patient

Each appointment type can have a procedure code associated, based on database build. The charges would be generated based on the procedure code associated to the appointment type. The same can also be accomplished via a generic appointment type with orders, the user manually selects the order specific to the need, screening versus actual treatment, as determined by the diagnosis.

Scheduling security allows you to associate specific personnel into groups that have defined privileges concerning what actions can be taken within the appointment book. Scheduling security can also determine override capabilities.

Patient Schedule Inquiry can be restricted to a particular scheduled resource or group of scheduled resources, or you can inquire about all appointments for a patient. For those with scheduling security, Patient Schedule Inquiry can be used to schedule, reschedule, cancel, hold for rescheduling, or modify appointments.

For viewing PACS images with the Rad report an exchange of information between Cerner's radiology solution and the PACS via an interface conforms to HL7 standards. A Cerner integrated solution seamlessly displays information for the order, person history, study history, reports and images within the technicians and physicians workflow.

2.1.13 OPERATING ROOM REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for the Operating Room, pursuant to Section 1.13 (Radiology Room Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's perioperative solution addresses the complex needs of the surgical service by providing a point-of-care, patient-focused solution that encompasses the surgical and anesthesia records, and integrates clinical patient information throughout the perioperative encounter. You can schedule and document multiple surgical procedures within a single case. Resources needed for the case are checked for conflicts during scheduling and can include surgeons, anesthesia providers, rooms, the patient, and schedulable equipment. You can also assign surgical personnel to rooms or cases.

Preference cards consist of pick list items, multiple comment fields, and documentation. These

preference cards can be generic procedure-based, or surgeon and procedure specific. Our user-friendly preference card wizard helps you build general procedure and surgeon-specific preference cards. The wizard assists you in creating preference card pick lists, procedure-specific documentation forms, procedure comments, and surgeon comments. You can create general procedure-level preference cards as a template for building surgeon-specific cards. If your current system contains up-to-date preference cards that can be extracted, we also provide an upload utility that can be used to create your preference card pick lists and comments. Your organization is responsible for the extraction of data from the historical system. Cerner will provide support to populate the extracted data into standard Cerner Upload Templates in order to facilitate a successful upload.

Unique to Cerner, the configuration of documentation on the preference card filters procedure-relevant fields to the clinician for documentation, thereby streamlining the charting process. Structured data, maintained on the preference card, automatically defaults to the patient's documentation when appropriate, allowing for documentation by exception.

When a case is scheduled, the correct preference card(s) is automatically associated with the surgical case based on the procedure(s) scheduled. At a predetermined point in time prior to the day of surgery, the solution automatically generates patient-specific case pick lists from the associated preference cards. These case pick lists automatically pull into case documentation, where you can document by exception and perform any patient-specific modification for materials used during the case.

We provide flexible, focused, forms-based data collection to support your perioperative documentation needs. Our starter set of documentation includes standard case information, case times, case attendees, surgical procedures, delays, counts, prosthetic devices, patient positioning, skin prep, intake/output, transport, laser data, and many others. If needed, your organization can also create forms and fields to fulfill additional specific requirements. Information obtained at the time of scheduling or available from the preference card defaults to the intraoperative record wherever possible, reducing redundant data entry, while simplifying and speeding the documentation process. All case attendees and times are easily recorded within the perioperative record. Charging is accomplished as a by-product of case documentation and supplies used. The tiering logic in Cerner's charge capture solution contains the rules that bill items pass through in order to attach prices and bill codes.

2.1.14 INTENSIVE CARE UNIT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Intensive Care Unit (ICU), pursuant to Section 1.14 (Intensive Care Unit Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Our Critical Care solution provides a complete workflow and documentation solution for the entire team including physicians. With CareAware iBus, we provide a true plug-and-play device connectivity into the electronic health record, including patient beds, vital signs monitors, ventilators, anesthesia machines, infusion pumps, and more. Our interactive flowsheets provide the ability to perform prebuilt simple to complex calculations, store the results as discrete data, and create line graphs using numeric data. In addition, the clinicians can use our clinical calculator accessible from the menu. Our Intake & Output flowsheet shows the entire intake and output information available on

a particular patient divided into time ranges that display subtotals as well as display the balance. Our I&O flowsheet can display in chronological and reverse chronological order.

Patient information drives the delivery of care with alerts, prompts and embedded knowledge all focused on the data entered and received about the patient. Diagnoses and medical problems prompt for specific plans of care; vital signs, height, weight, and lab results drive order selection and prompts for appropriate documentation. Our structured enterprisewide repository, of all clinical information, can originate from numerous sources, such as various labs, and is maintained in an easily accessible, standardized format. You can create views grouping the stored data as desired to record and/or view the continuum of care. Our advanced graphing capabilities support the creation of graphs that can display results from intake and output measurements, bedside medical devices, numeric lab results, assessments, and medication dosages such as vasoactive agents. Our graphing supports comparative data using multiple y- axis lines and unique point indicators. Multiple data items in a graph can be viewed together for identification of trends, copy paste into progress notes, and print on demand.

Our system can integrate with bed side point of care equipment providing immediate results. Our point of care solution supports verification of the correct patient, medication, dose, route, and date/time.

2.1.15 REHABILITATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Rehabilitation, pursuant to Section 1.15 (Rehabilitation Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Clinical Data Repository is the foundation for a multitude of Cerner point-of-care-specific solutions, including those for home care, physician offices, clinics, acute patient care, critical care, and long-term and rehabilitation services.

For example, we offer Executable Knowledge for both inpatient and outpatient rehabilitation care. Executable Knowledge for Inpatient Rehabilitation is Cerner's interdisciplinary care documentation solution for the adult and pediatric patient population. The content enabling this solution meets the requirements of submission of Inpatient Rehabilitation-Patient Assessment Instrument (IRF-PAI) data to CMS. We developed this content through a partnership with the Rehabilitation Institute of Chicago (RIC). Our Rehabilitation content provides a number of PowerForms, PowerNotes, PowerPlans, and Patient Care Summary Views, as well as an IRF -PAI Data report. Executable Knowledge for Rehabilitation supports the following services, Physical therapy, Occupational therapy, Speech language pathology, Care management, Physician workflow for orders and documentation, and clinician workflow. Furthermore, our outpatient rehabilitation content also supports the following disciplines: vocational, wheelchair and seating, and psychology.

With our rehabilitation content and work flows IRF-PAI data points are collected as a bi-product of documentation and includes built-in reference and interpretations to assure accurate documentation and calculation of the scores for admission and discharge and creates a .csv file with the scores that can be sent to CMS or a third party system for submission.

Charges are captured at the point of care for timely and accurate billing. Our Interdisciplinary documentation includes team conferences, discharge documentation, and interdisciplinary care plans. Team conference documentation is easily completed and pre-populated from previously

documented information. Current and previously documented information auto populates notes and forms for accurate and rapid completion of documentation. Staff and clinicians have easy and direct access to reference text built in various sections within the system for published definitions and standardized procedures. Our content includes many forms and notes specific to rehabilitation including the documentation and calculation of functional independence measures scoring. The form uses branching logic to arrive at the scores for OT, PT, SLP, and Nursing.

For internal physician approvals, the order/requisition can route to specific inboxes in our message center. The provider can approve the request on a specific form or note and resend the approval to the requesting provider/department inboxes. For external physician approvals (external to our system), the order or requisition can print to selected fax devices. The approver can mail or fax the completed form back to the organization. With our Scanning solution, the scanned document can become a permanent part of the medical record and attach to the patient's electronic medical record and the specific rehabilitation encounter. Cerner offers a scanning solution, Document Imaging, but is has not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.

2.1.16 ENTERPRISE MASTER PATIENT INDEX (EMPI) REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Enterprise Master Patient Index, pursuant to Section 1.16 (Enterprise Master Patient Index (EMPI) Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's registration and EMPI solutions generate an EMPI number in real-time. Cerner's EMPI solution provides the ability to correlate identifiers from multiple contributors using advanced matching algorithms. The data model stores all person identifiers coming from all contributing sources.

The Combine Tool is used to eliminate duplicate records by combining persons and encounters in the database. You can separate person and encounter records that were combined in error, or move a single encounter from one record to another. An online work queue includes a percent column that reflects the probability of a match. A safety mechanism exists to prevent accidental combining of encounters for two different persons. Cerner's EMPI provides additional probabilistic suggest logic to the search process and scripts/reporting mechanisms used to identify duplicate records. This logic recommends persons for potential combination due to errors in the key data fields or name changes. Recommendations are assigned linkage proximity, (confidence levels) through the use of SOUNDEX and NYSIIS phonetic encoding of first and last names, nickname pools, birth date range qualifiers, and transposition fuzzy logic. User-defined weight tables can be used to calculate the confidence levels. Duplicate record creation is prevented with the initial search of the database for a person or encounter. Depending upon match criteria defined, the search returns potential matches to the person/encounter entered. Auto-combine capabilities and potential match reports are also provided.

The Phonetic Search option, an advanced search algorithm, includes the ability to perform inexact matching of the data provided from the Cerner Millennium common person search through all Cerner Millennium applications, passively through the inbound ADT interface match and reconcile processes. Errors such as misspellings, complex transpositions, name swapping, extra characters, and

missing characters are all taken into consideration. Thresholds for reconciliation of records or posting to the manual queue can be set by contributor system or a general default.

Passive implementation involves the behind the scenes interfacing in both a real-time and batch interface mode. It contains logic to match on local identifiers and reconcile persons across the enterprise. Probabilistic suggest logic can also be implemented. This is reactive, catching duplicates and exceptions after the registration process is complete.

Eligibility verification allows for a transaction to be sent to registration. Cerner supports clearinghouses/payors that are HIPAA compliant using the ANSI 4010/5010 270/271 transaction set or ANSI 5010 270/71 transaction set. The eligibility request is launched on demand via manual intervention. The response returns to your screen and displays the information retrieved from the clearinghouse/payor. Discrete data elements are posted at the person encounter level. The number of insurance company profiles is unlimited.

Cerner supports the Medical Home/Accountable Care Organization with our integrated, patient-centric, evidence-based solutions designed to enhance the workflow of the provider, improving the ability to provide optimal, safe health care. All information, from the first encounter to the last, resides in our longitudinal relational database. As clinicians, staff, and providers collect information, it becomes a permanent part of the patient‘s medical record and is immediately available to other care providers. We provide clinicians with the necessary, most current and relevant medical decision support at the point of care in views that fit clinician workflows. Components include:

*Health Maintenance: Provides prompts around health maintenance needs and provides a proactive approach for assessing patient needs through the year, based on the patient‘s age, procedure, diagnosis, gender, or documented problem.

*Chronic Condition Management: Includes contextual summaries and evidence-based treatment. Population and provider performance reports aggregate performance metrics, permitting physicians to compare and improve their individual clinical performances against standardized performance targets and peer performance.

Our package of solutions enhances the quality of care, decreases costs, and improves overall patient outcomes. Cerner systems provide you with the means to manage your community‘s health care requirements more effectively, efficiently, and transparently than ever.

2.1.17 HEALTH INFORMATION MANAGEMENT (HIM) REQUIREMENTS

Provide Proposer’s overall summary description of how its proposed EHR System meets the needs of DHS for Health Information Management, pursuant to Section 1.17 (Health Information Management (HIM) Requirements) of Appendix H (Functional Requirements). Proposer’s response for this Section is limited to 1 page.

Cerner’s HIM solution focuses on attaining increased productivity and operational management in the medical records department, whether addressing health information needs locally or across your health care organization. Cerner Millennium's single architecture provides an integrated set of functionality committed to benefiting your organization by eliminating redundant data entry and minimizing manual activities, including task management, chart tracking, deficiency analysis, and comprehensive reporting.

Cerner’s HIM solution’s patient deficiency analysis and physician deficiency analysis application

manages the life cycle of the documents needing chart completion, including chart aging, management assignments, tag color, deficiency slips and pull lists. All types of documents can be managed regardless if they are in paper, electronic or scanned format. You can generate form letters notifying health care providers of deficiencies. Your organization designs the content of the letter and enters the qualifying parameters for its recipients. Notification of document deficiencies can be sent to the clinician's inbox and can be automatically completed through recognition of electronic document capture and signature events within PowerChart.

A variety of ways that deficiencies are assigned is provided. Your system administrator defines the time ranges for the chart and document ages that constitute deficiencies, delinquencies, and suspension.

Cerner's HIM solution's chart tracking application is used to manage the paper chart. Chart tracking provides you with the tools to manage the movement of patient chart media throughout your organization. You can create new chart volumes using a system of filing by patient chart, as well as by unit record. You can perform an inquiry to locate a specific chart volume, or record the movement of a group of charts from one location to another. You can select a patient and view the patient's visits with a list of each visit's corresponding chart media, or you can select a location and view a list of all the chart media from various patients currently at the location.

With the chart abstracting application provided in Cerner's HIM solution, you are provided with a wizard tool that allows you to determine what data elements to collect as well as a forms tool that allows you to design the form on which the data elements are captured. There is no limit to the number of user-defined fields allowed. You can identify timeframes for capturing data elements. Additionally, you can define which fields are required and which are optional.

With the chart coding application provided in Cerner's HIM solution, diagnosis, grouper, procedure codes and related information for a patient visit is captured. Chart Coding is integrated with Cerner's Encoder/Grouper powered by OptumInsight. Chart coding provides the basis for initiating the concurrent coding process by having coders select from working diagnoses and procedures identified and passed in from other Cerner solutions. Additionally, Cerner's HIM solution can be interfaced to a third party encoder.

Cerner's HIM solution provides a release of information (ROI) application that is used to manage your ROI process. Our ROI features include the ability to notate received requests, validate the authorization for the release of information, provide historical documentation of the information released, and support for the management of any associated reimbursement receivables. ROI has the ability to track both paper based and electronic documents that have been requested and mailed and allows for specification for which requests apply to accounting of disclosures. Tracking/reporting can be applied to all requests or just those applicable to accounting of disclosure reporting.

Cerner does not offer a transcription solution. Cerner supports a bidirectional transcription interface between the Cerner system and a foreign transcription system.

2.1.18 EMERGENCY DEPARTMENT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Emergency Department, pursuant to Section 1.18 (Emergency Department Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Emergency Department solution creates an environment of readily accessible information that allows you to track patients and events in your Emergency Department in a timely fashion, particularly during peak flow periods. In designing your system, you can define any number of Emergency Departments and/or number of areas within an Emergency Department.

Our tracking board provides a detailed view of all emergency patients and can include information such as acuity, length of stay, assigned providers, patient location, results generated by ancillary departments, and other information.

With our quick registration, you can immediately begin patient assessment and treatment. For patients who are en route to your facility, our pre-arrival functionality allows you to document patient information without having to create an encounter. This includes information such as name, gender, reason for visit, DOB, age, pre-arrival mode, estimated arrival, and primary care physician. The patient name, gender, and reason for visit populate the tracking board. You can use free text to collect additional information such as vital signs and required orders/protocols. When the patient arrives, you can easily attach the pre-arrival documentation to the patient encounter during registration.

For trauma situations or mass casualties, you can define a quick registration screen that allows the triage nurse to enter multiple patients into the solution and display them on the electronic tracking board immediately so that care is not delayed. Our solution has a virtually unlimited capacity for the number of patients received and allows you to add beds, stretchers, and chairs to the tracking screen on the fly.

Our Emergency Department nursing documentation includes assessment forms, flowsheets, orders, results viewing, medication administration charting, intake and output worksheets, immunization records, clinical notes, data captured from bedside medical devices, and other documentation formats to support your needs. Clinicians can quickly access the patient's history, such as diagnoses, orders, results, documentation, and disposition. Ready access to the complete patient chart and streamlined communications help decrease length of stay and time to diagnosis.

Our Emergency Department physician documentation addresses more than 700 age- and gender-specific presenting problems. Template documentation enables clinicians to address multiple patient complaints while omitting redundant questions. Previously documented information can pull forward into current documentation if desired. For example, you can pull allergies, past medical history, previous medications, into the current visit. Charting is simple, quick, and customizable.

Our solution provides access to current visit information as well as the complete patient history. With the Cerner Millennium architecture, all patient data is stored within a single electronic medical record and is available to all clinicians with the appropriate security. Because Cerner Millennium solutions share a single database, transfer of patients is simplified.

2.1.19 CARDIOLOGY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Cardiology Department, pursuant to Section 1.19 (Cardiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

With the interfacing capabilities built into the Cerner Millennium architecture, Cerner can help you make your cardiology processes smarter, greatly improving care and managing costs.

Major Features of our Cardiology system include:

- Multi resource scheduling
- Clinical documentation
- Physician documentation
- Template driven procedure reports
- Management reporting
- Inventory management
- Order management
- Charge capturing/generation
- Image management
- Electronic medical record
- FSI interfacing
- MDI interfacing
- National registry certification

Cerner's cardiology system is a knowledge system that enhances outcomes measurement. As data is gathered from multiple departments, the Cerner system transforms this data into knowledge, which is used to give the user informed suggestions and report summaries.

Cerner provides a variety of data entry options. Data may be captured discretely in forms via multiple field options such as numeric, grids, pick lists, combo boxes, alpha responses (single select, multi-select), date/time, yes/no, and so on. A free text field can be built into any form to allow capture of free text information within the form. An unlimited number of templates can be defined by your organization within Clinical Notes. Clinical Notes are free text notes, and Smart Templates allow data to be pulled from the clinical data repository into the note. Documentation on custom flowsheets is also supported, in which data may be captured discretely or as free text. We offer cardiology specific templates that include a coronary arteries graphic to assist with documentation of artery occlusions and collateral circulation.

The Cerner system provides multiple options to support notification of clinicians of results within PowerChart. Rules can be defined to send defined providers a message to a pager, inbox, email or printer based on a test results. Test results can be viewed in the flowsheet. Clinicians can also view all new results in a new results folder of the inbox.

2.1.20 MANAGED CARE REQUIREMENTS (OPTIONAL)

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Managed Care, pursuant to Section 1.20 (Managed Care Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Benefit Administration Services provides the foundation for a robust health plan benefit administration service for members of the employer's health plan. Plan contracts are managed through Benefits Management solution; maintains terms and conditions of relationships; manages information related to insurance plans, member demographics, EDI eligibility verification, detailed coverage and benefit information, referral and authorization management, initiation and storage of

Electronic Data Interchange related to the health plan. EDI transactions are sent via clearinghouse for eligibility verification; status of verification is displayed and stored. History, audit, and reporting tools are available. Information about members is stored and linked to a community-based provider directory and non-network providers for analysis of physician panels.

Cerner's Eligibility and Benefits Verification Service with Registration provide; current eligibility verification functionality, support third-party clearinghouse or individual payor that is HIPAA compliant using ANSI 4010/5010 270/271 or ANSI 5010 270/71 transaction set. Eligibility request can launch on demand, response returns in a window format and displays the information and can print the response. Returned information posts discrete data elements at the person encounter level. Registration initiates an eligibility request using a proprietary structure with a web service and is converted to an X12(ASC) 270 Eligibility Request (covered HIPAA transaction) before routed to payors. Cerner has connectivity to over 700 payors/health plans through three major healthcare clearinghouses. Cerner's Eligibility & Benefits Verification Service offers enhanced EDI including transaction caching, cascading searches, alter request by add service types, and filter response by limiting service types.

Cerner's medical administration functions comprise a care coordination/management approach and includes utilization management, case management, disease/health/condition management components. Disease Management is patient centric including health management across venues and encounters within Cerner including; Health Maintenance, Condition management, Readmission prevention, Care management. Care Management translates clinical and financial data to improve performance, care coordination, efficiency, and outcomes. Included in Care Management; Utilization Management, Discharge Case Management, Denial Avoidance Management, Document Integrity/Quality and a natural language processing (NLP) engine for automated inpatient criteria and identifying a working DRG. Power Chart functionality enables a work list and patient list view.

Health Maintenance allows for proactive and future directed care based on the patient's specific condition(s), diagnoses, demographics, needs and scheduled screenings. Invitations and scheduling of appointments can be done through the Health Maintenance function.

Condition management allows for specific protocol, orders and plans of care in managing a patient's condition across the continuum and encounters. Summaries provide clinicians with a consolidated view of key information and evidence-based treatment algorithms. The Readmission prevention works with the Care Management, plan of care and discharge functions to assist in managing high cost, high volume readmissions. Case managers in the ambulatory setting can then follow through with the patient post discharge and across visits.

Another component that would assist Managed Care programs would be the Cerner Health functions that include wellness advisors, coaches and the Patient portal that would allow communication to and from the patient/provider directly.

2.1.21 ANESTHESIOLOGY REQUIREMENTS (OPTIONAL)

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for the Anesthesiology Department, pursuant to Section 1.21 (Anesthesiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Anesthesia Management provides complete access to both inpatient and outpatient data

within the patient's electronic chart to help you adequately prepare for cases, create an anesthesia plan, assess risk, set daily priorities, and accurately complete documentation.

Because it operates on the Cerner Millennium architecture, our solution is the only one that unifies anesthesia care with related nursing documentation, and shares information with other Cerner Millennium solutions. An interface is not required.

With our solution, you can obtain and/or review tests and consultations, past medical history, and current medications – which are all necessary to prepare for administering anesthesia. You can also document the proposed anesthesia plan including invasive monitors and special techniques required. You can review drug therapy, as well as order and/or document administration of preoperative medications. The ASA and anesthesia type, once documented in anesthesia, updates the surgery record with the correct information.

Drug and allergy checking provides the ability to check allergies and current medications against a list of drugs built in anesthesia, and alert the provider to those which may cause a drug/allergy or drug/drug reaction. You can hover on the warning icon, click on the tooltip, and launch the interaction window to display the detailed information.

The anesthesia preop note allows for the documentation of anesthesia history, review of systems, allergies, current meds and problems, medical history, family history, social history, physical exam, pain assessment, airway assessment, results review, ASA classification, anesthesia plan, and others.

You can create an anesthesia record for patients receiving any type of anesthesia. Since Cerner Millennium solutions share a single database, patient identification automatically populates and is uniform across the patient's single electronic medical record. Any personnel, actions, device data, medications, input, output, and times can be easily recorded within the time-based view of the intra-anesthesia record.

Providers can document quickly and accurately throughout the procedure. Bedside medical device interfaces default collected values from the patient monitors onto the anesthesia record. These values can be modified if needed for accurate charting. Charting efficiency is increased with point and click, click and drag, touch screen methods, and macros. Macros allow for several events (such as a medication, fluid, or actions) to be documented with a single execution. As part of the macro, you can select to specify the values associated with each event, or leave them blank to document individual values directly on the case record.

You can also record any complications, adverse reactions, or problems that occur, along with the time and description of symptoms, vital signs, treatments provided, and response to treatment.

2.2 APPENDIX H-1 (FUNCTIONAL REQUIREMENTS ATTACHMENT) AND APPENDIX I-1 (TECHNICAL REQUIREMENTS ATTACHMENT)

Affirmatively confirm whether or not Proposer has responded to all the requirements in the checklist in Appendix H-1 (Functional Requirements Attachment) and Appendix I-1 (Technical Requirements Attachment).

Requirement	Yes	No
Proposer has responded to all the requirements in the checklist in Appendix H-1 (Functional Requirements Attachment)	☒	☐

Requirement	Yes	No
Proposer has responded to all the requirements in the checklist in Appendix I-1 (Technical Requirements Attachment)	☒	☐

2.3 APPENDIX I (TECHNICAL REQUIREMENTS)

2.3.1 ARCHITECTURE

Provide Proposer's architecture for the proposed EHR System, pursuant to Section 1.1 (Architecture) of Appendix I (Technical Requirements). Provide any high-level diagrams showing major system components, their interrelationships, and supporting diagrams and materials in response to this Section as Attachment I (Architecture). Proposer's response for this Section is limited to 8 pages.

Our architecture is a multi-tier, client/server system. Core processing (security, messaging, etc.) is separated from varied application servers, which are separate from client presentation devices. Our architecture is comprised of Presentation Software – using Microsoft Windows and Millennium Application Software, and Data Management Software – using Oracle's relational database management system. Cerner developed our distributed transaction, client/server architecture to provide higher levels of security, data integrity, greater reliability, load balancing, scalability, and better performance than that of distributed or clustered hardware.

With Cerner's system design, rather than the Windows Client application directly accessing the database, it communicates with a Millennium application server, which in turn communicates with the database. Application server communications (sometimes referred to as middleware) is the key to the high performance processing needs of physicians, nurses, and other providers in clinical care settings.

Multi-tiered, client/server systems can support thousands of concurrent users and is therefore scalable to full enterprise or nationwide roll out. Multi-tiered, client/server architecture allows you to both distribute workload across multiple servers, as well as better manage system-wide growth and performance. Additionally, a multi-tiered architecture is a critical component of adapting Web services technology to the broader audience. Application solutions that are not based on an N-tiered model will have to be redesigned to take advantage of this latest advance in technology in a graceful and cost efficient manner.

Our solutions can be deployed on a variety of hardware and operating system platforms. The client component is deployed on a Microsoft Windows 32 bit operating system; for example, Windows XP, Windows Vista, Windows 7 and/or Windows Terminal server with Citrix Presentation Server. The distributed application servers are deployed on Windows Server 2003 or Server 2008 32 bit or 64 bit. The database engine servers are currently deployed on 64 bit IBM AIX, 64 bit HP's HP-UX, or Red Hat Enterprise Linux operating systems.

Cerner assumes all responsibility for hardware in the data center with the Remote Hosting Option (RHO) model. Your institution still owns/manages your desktops and peripherals at your location. For Thin and Fat client requirements, please refer to the Cerner_Workstation_Requirements.pdf located in the Additional Reference Material section. Mobile device support falls under three categories:

Mobile PC [Devices] on rolling carts or wireless laptops. The deployment of Millennium on these

kinds of devices is typically the placement of a shortcut or icon on the desktop or toolbar that launches a Citrix session. Clients can use any technique to place such shortcut/icon that Windows supports.

Fat client with wireless card. Client may use any technique compatible with Windows to place the Cerner code on the device.

For PDA type devices [such as Motorola, Honeywell, Hand Held Products, etc.] that have embedded radios and bar code readers, Cerner offers two applications: one for nursing and meds administration and another for specimen collection. Both of these applications are very different from the Windows versions which offer equivalent and in some cases additional functionality. Cerner mobile solutions are written specifically for the attributes and real estate of the mobile device and the work flow. To manage the software component of the PDA device, Cerner recommends and supports the use of SOTI MobiControl which uses a server to store the code that is eventually pushed to the physical device. http://www.soti.net/

For smart phones, IPhone, Blackberry, IPAD, and other web enabled end user devices, Cerner's strategy is based on HTML and other web standards. Currently, these devices can launch a number of web based Millennium patient summary views and dashboards which are specifically designed for a "single click" view of the patient's current condition.

Currently Cerner supports IBM AIX operating system on Power servers, HP's HP-UX operating system on Integrity servers, Microsoft Windows Server on Intel-based servers, and Linux on Intel and AMD based servers, depending on the solution being utilized. With the remote hosting option Cerner will manage the deployment of the database server on the platform of our choosing.

Our objective is to design a system architecture that meets the needs of your current processing environment while planning for potential growth and expansion requirements. We focus on specific technology attributes, such as performance, availability, scalability, and integration, when determining the best possible system solution. In selecting a technology platform for use with our applications, Cerner evaluates the extent to which it is capable of scaling. We currently configure systems using data center equipment from HP and IBM. Both HP and IBM design and manufacture systems that scale well.

With our Remote Hosted Option (RHO), Cerner will scale the system as needed. A 10% or 20% increase in users will not affect performance. Cerner's multi-tiered, client/server systems can support thousands of concurrent users and is therefore scalable to full enterprise or nationwide roll out.

Cerner builds overhead allowances into production systems through our standard redundancy configurations. We can also take advantage of non-production system resources for utilization in the event of an emergency and usage spikes

Cerner no longer publishes documentation using the old paradigm of writing static documents and distributing these to clients in hard copy or even electronic form. Cerner has adapted social networking technology to communicate and publish all types of solution documentation to clients licensing our various solutions.

You can create meaningful customized views of information from the clinical data repository to support the vast needs of all types of roles, areas and user level preferences. Summary screens, predefined views, flowsheets, patient lists, Message Center, orders, interactive view, structured documentation templates, pathways, problem list, clinical, documentation forms, clinical summary and task list are all examples of views that can be customized by area and/ or role to meet your

needs. For example, your organization can build documentation forms to support the capture of all pertinent data describing the patient event or condition in a clear, easy-to-complete format. Your organization can define the discrete data fields within the forms and the appearance of the forms, including sections of the form and layout of the data fields. Data fields can be defined as required fields

Remote user access to a Cerner Millennium domain can be provided with Windows standard Dial-up Networking utility and third-party products such as Microsoft's Remote Access Server (RAS) or any other technology that provides a TCP/IP network connection between the Cerner client code and the Cerner server code.

Cerner designs high availability into each system using component redundancy. For maximum reliability, we are able to offer clustered solutions that provide extremely high levels of availability and continuous access for critical data and applications. For clients requesting high availability solutions, we take advantage of multi-system clustering technology in combination with software features of Cerner Millennium that allow us to provide the necessary application recovery on a clustered machine. Cerner has selected HP ServiceGuard for HP-UX and IBM PowerHA for AIX to provide the best operating system capabilities for automatically reconfiguring the available replicated resources when hardware failures or outages occur. In the event of a complete failure of a cluster, the failover or restart of the Cerner Millennium applications may be accomplished on a surviving node in the cluster. This failover and recovery/restart is generated through the modifications of supplied scripts to meet our clients' application requirements.

For high availability in the storage farm, Cerner Millennium is able to utilize multiple paths offered in the latest switched fiber channel storage area network and virtual storage arrays. All recorded information can be protected by RAID 1, RAID 0+1, or RAID 5. Cerner uses a combination of these technologies and hot spare disk drives to provide a balance of performance, reliability, and availability.

For the most demanding high availability environments, Cerner also offers solutions that can include standby databases and disaster tolerance.

Cerner uses a variety of monitoring tools such as Cerner Olympus and specific knowledge modules to proactively monitor the system around the clock.

Cerner Millennium is an online, real-time system that is designed for continuous operation. No routine downtime is required for backups, reporting, or other day to day activities. Downtime may be required for major system upgrades such as an Oracle upgrade. The client can schedule upgrades at their convenience.

Telemetry data is available for client viewing via Cerner's Lights On Dashboard Reporting System. Lights On is a systematic approach to improving system stability through collective knowledge and proven practices acquired through the continual monitoring and management of the Cerner Millennium environments by CernerWorks (Cerner's remote hosting organization). This Cerner led engagement will install, configure, and demonstrate the use of a set of tools designed to provide additional information about your production Cerner Millennium technical environment.

Cerner's Response Time Measurement System (RTMS) for Millennium provides the ability to view and trend application response times from the time a user clicks a button in a Millennium application, to the time the transaction is processed and focus returned to the user. These RTMS timers capture the amount of time that transactions are processed by middleware or database components – the user's wait time experience. The RTMS timers are written to flat files on each

application back-end server and can be viewed in several ways:

• A standalone RTMS viewer provided by Cerner to its clients, that allows viewing of the raw RTMS data

• Cerner Olympus, which allows for viewing, trending, sorting, and searching on the raw RTMS data

• Cerner Lights On Network, which is populated nightly for each client and shows the long-term trending statistics for each client's RTMS data.

Cerner has selected HP ServiceGuard for HP-UX and IBM PowerHA for AIX to provide the best operating system capabilities for automatically reconfiguring the available replicated resources when hardware failures or outages occur.

For clients who take advantage of Cerner's Remote Hosting option, Cerner's primary defense against unplanned outages is prevention. Cerner utilizes a state-of-the-art technology center to host Cerner Millennium systems, complete with multiple power feeds from two different power generating sources, backed up by multiple UPSs, backed up by multiple generators with enough fuel storage capacity to run for several days. Likewise, for telecommunications Cerner utilizes redundant carriers and installs redundant circuits (each circuit is sized to carry the full load). Our technology center is fed by 4 different central offices and is fed by 2 different SONET rings. Cerner does not rely on Internet connectivity for any mission-critical functions due to its variations in availability, stability, and performance; however, in the unlikely event the dedicated frame circuits are unavailable, the Internet can be used as a backup.

Also available as an optional service, for an additional fee, are Hot Site Disaster Recovery services. Hot Site Disaster Recovery services add an additional layer of redundancy and protection. With this service, a mirrored system is set up in an alternate data center, constantly being updated by transactions from the primary production database. In the event the primary production system is unavailable for any reason, the Hot Site Disaster Recovery system can be activated quickly as the primary system, providing even greater protection.

Software components are located in Appendix Q (Pricing) document. Cerner's application tier is split across the PC client and host server cluster. The client is programmed in Visual Basic, Visual C, and Java. These languages utilize many Microsoft Foundation classes, COM, and OCX objects. On the host cluster where the application servers and Oracle database resides, Cerner programs in C++, enterprise Java, and Cerner's adhoc report writing tool's scripting language. For our Internet browser development, we use Dynamic HTML, Java Script, and enterprise Java. Cerner uses Oracle 11g as our RDMBS. The Cerner Message Bus (CMB) is our inter-server/inter-nodal communications medium for client/server applications. It is a message passing middleware, which ensures reliable information exchange using a request-reply structure. Our supplied reporting tool is Discern. Discern Explorer is a full-featured, fourth-generation programming language, patterned after Structured Query Language (SQL). All Cerner Millennium applications use Discern Explorer to select, insert, update, and delete data. The planned

With the remote hosted option, clients will connect through Citrix options. Bandwidth Formulas (for network planning purposes only):

• Medical Device Instruments:

The formula listed below is the minimum requirement for instrument interfaces:

Number of Instruments * 1.2 Kilobits/second

Example: 14 instruments * 1.2 = 16.8 Kilobits/second

- Barcode Printers:

The formula listed below is the minimum requirement for bar code printers:

Number of Bar Code Printers * 1.5 Kilobits/second

Example: 10 Bar Code Printers * 1.5 = 15 Kilobits/second

- Laser Printers:

The formula listed below is the minimum requirement for laser printers:

Number of Postscript Pages/minute * 1.3 Kilobits/second

Example: Four 17 page per minute laser printers

Four * 17 pages/minute * 1.3 Kilobits/second = 88.4 Kilobits/second

- Microsoft Windows Devices for thick client PC deployments of Cerner Millennium:

The formula listed below is the minimum requirement for PCs running Cerner solutions on Microsoft Windows:

Number of Microsoft Windows devices * 32 Kilobits/second

Example: 40 Microsoft Windows devices * 32 = 1280 Kilobits/second

- Microsoft Windows Devices: for thin client PC deployments of Cerner Millennium using Citrix:

The formula listed below is the minimum requirement for PCs running Cerner on Microsoft Windows:

Number of Microsoft Windows thin devices * 20 Kilobits/second

Example: 40 Microsoft Windows devices * 20 = 800 Kilobits/second

The formulas above are averages that can be helpful in estimating individual network bandwidth requirements for any Cerner Millennium Microsoft Windows-based application. The client agrees to provide a minimum of 128 Kilobits/second bandwidth per circuit on any given segment end-to-end.

With our optional Application Management Service (AMS) offering, County would submit requested changes to Cerner. Cerner would make the modifications to the system as needed. If the optional offering is not selected, County would be required to make the changes to business rules.

2.3.2 INFORMATION MANAGEMENT

Provide Proposer's proposed information management strategy for the EHR System, pursuant to Section 1.2 (Information Management) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Oracle 11g is the current standard

Two levels of storage are supported. The first is the use of the SAN storage configured in an applicable RAID format followed by offline storage as tape, DVD, CD or MOD.

Please refer to section 3.1 of Exhibit N.2-1

Contractor will utilize its own back-up and recovery policy. Policy can be provided upon request.

Three primary environments will be configured to support your Cerner System:

- Certification -- Test changes prior to implementing in production
- Production -- Daily transactions

- Training -- Training is typically a mirror of production

With Cerner's System Design, there is no need to purge or archive patient result data.

Since patient result data is not purged from the Cerner Millennium database, users at your organization have immediate access to the entire patient record, including information from current and past visits. The workflow tables containing data that is no longer required can be purged according to specific selections that the client can make.

Cerner's DM Purge Job Manager is the tool we use to purge that data using user input as criteria. This tool uses purge templates that are created for each Millennium solution that is given client defined criteria to determine what data is to be purged. Cerner Millennium Operations allow clients to schedule when purge templates defined in DM Purge Job Manager will execute. Each and every purge template in the DM Purge Job Manager will have a section in the DM Purge Job Manager help file describing the following:

- High level description of information that will be purged
- Tables impacted by the purge
- Details on criterion that must be configured

Cerner is considered an open system and can readily communicate with foreign systems by either sending or receiving data. Most of the data exchange is accomplished via electronic interfaces, but data can be extracted from the Cerner Millennium database and sent in an agreed upon format to a foreign system or database. Such an example would be data exportation to a comma-separated value file. All data will be transported under encrypted pathways.

Cerner applications utilize an Oracle Relational database system and gain the benefit of Oracle's row level locking capability, which allows multiple users to access and view a patient's chart concurrently. In the event that more than one user attempts to update the same field at the same time, the system will lock the field and allow one user to make their change, and then unlock it for the next user to change. The changes are sequential rather than concurrent, averting the situation of a locked chart. This feature works regardless of the type of change being made.

2.3.3 SYSTEM SECURITY

Provide Proposer's proposed security strategy for the EHR System pursuant to Section 1.3 (System Security) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Position-level security logic, sets permission to access an application or a task within an application, or a task group based on a user's position. Positions are defined for every user in the system.

A user is assigned to a position through the user maintenance tool. A user's position is designed to include all the tasks that might be needed to perform his or her job. Multiple users with similar job requirements can be associated with a single position, which aids in the maintenance of security profiles. Only users with appropriate privileges are granted access to the user maintenance tool.

Positions are created as reference data. Employee position assignments within the system may or may not be similar to employee titles within an organization. All positions associated with an application group have the same access to an application, although application groups can be edited to grant/revoke access at any time.

The Cerner Millennium architecture provides access at the individual task level. Each function that a user can perform within a Cerner Millennium application is defined as a task, and each of these tasks can be included or excluded from the application group associated with a user's position. This enables flexibility within the system, as well as improving ease of maintenance.

For applications involved in ancillary departments, access to data is managed through tasks (for the data types accessible) and through the association of users to the organization where patients are registered or admitted for service (for access to visits). Ancillary users can further be limited to access to only certain performing sites where they are assigned to work. Access to specific data elements is further managed through data privileges for direct patient care applications.

Cerner Millennium architecture provides access at the individual task level. Each function that a user can perform within a Cerner Millennium application is defined as a task and each of these tasks can be included or excluded from a user's position. This enables flexibility within the system, as well as improving ease of maintenance. Access to patient information is role based, on a need to know basis. System support and maintenance personnel do not have access to patient information.

With our optional Application Management Service (AMS) offering, County would submit requested changes to Cerner. Cerner would make the modifications to the system as needed. If the optional offering is not selected, County would be required to make the changes to business rules.

2.3.4 HOSTING

Provide Proposer's proposed hosting strategy for the management, security and performance of the computing systems required to operate the EHR System pursuant to Section 1.4 (Hosting) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 5 pages.

When employing our Remote Hosted Option (RHO), CernerWorks acts as the client's remote IT department, providing the functionality, management, and support of Cerner's solutions while minimizing the client's investment of capital and human resources. RHO is available to all Cerner clients.

An RHO client purchases Cerner software, as well as their desktops and peripherals, and contracts with CernerWorks for customer support and implementation services. The organization also contracts for the use of system hardware and related network services in one of our Cerner Technology Centers (CTC). The CTC provides the hardware, secure hosting, connectivity, and IT expertise that keeps the systems running.

Application processing and data storage is hosted at the CTC and is maintained by a staff of Cerner system experts. CernerWorks takes responsibility for system maintenance, backups, upgrades, and client support. Continuous system monitoring identifies potential issues before they arise and ensures optimum system performance.

RHO provides superior performance, security, reliability, and scalability with a lower up-front financial commitment from the client by combining hardware, networking technologies, and technical expertise. It allows healthcare organizations to leverage the most sophisticated and powerful IT solutions available today. RHO can provide significant cost savings and competitive advantages. It helps avoid depreciation and obsolescence and frees your IT department to focus on core issues.

Cerner's RHO solution provides the following:

- Necessary technology skill sets
- Cold site disaster recovery
- System redundancy
- Rapid addition of clinical sites/scalability
- Allows business focus on "core competency"
- Guaranteed system availability and performance

For remote hosting, Contractor does not calculate support availability; however, system availability is calculated per section 4.3 of Exhibit N.2-1.The Immediate Response Center is available 24x7x365 for critical issues.

Contractor will not agree to an SLA of 99.99%, Contractor will agree to a maximum of 99.9%, reference section 4.3 of Exhibit N.2-1; Contractor does not have information which can be shared as part of an RFP; however, once an NDA is in place, then details are capable of being provided validating Contractor's ability to maintain 99.9% system availability.

Severity levels and commensurate response times related to performance issues, incidents, and loss of service are not determined during the proposal process. These items are discussed during contract negotiations.

Our Monitoring tool, Olympus, provides many functions to monitor the overall health of the system at the different layers. CernerWorks will provide monthly up-time reporting statistics.

Multiple layers of physical security exist, beginning with the off-site location of the alternate data center. The structure has perimeter security, facility security, and biometric authentication security throughout. More advanced whitepapers can be provided that elaborate on physical security. The Cerner database is secured through the Cerner application servers with end users accessing the Cerner application server rather than the database directly. We rely on Oracle security for the central database to provide security to the data in Oracle.

Methodology: All systems not specifically identified in the "Exclusions" portion of the RHO backup policy will be backed up on a daily basis to minimize the exposure to loss of mission critical or project sensitive data.

Systems and Utilities

Open VMS, Windows, and Linux: An appropriate backup solution will be used to perform backup and recovery operations of operating system and non-operating system data.

AIX: AIX backup utilities are used to perform mksysb (image) backup and recovery of AIX Operating Systems. An appropriate backup solution will be used to perform backup and recovery on all systems configuration information and non-operating system data.

HPUX: HPUX backup utility mk_net_recover will be used to perform a backup and recovery of the HPUX Operating Systems. An appropriate backup solution will be used to perform backup and recovery on all systems configuration information and non-operating system data.

Oracle: Oracle RMAN utility will be used to perform database backup and recovery of Oracle databases. The RMAN utility will integrate with an appropriate backup solution to provide a transport to backup media.

Backup Window: Backups (full or incremental) will be conducted daily during off-peak business hours in the client's time zone. Backup jobs will be staggered throughout the window to ensure optimal performance and reliability.

Maintenance Window: A weekly window will be scheduled to perform maintenance on the backup system. Scheduled restores will not take place during this window; however, emergency requests will be evaluated as requested.

Full Backup: Full backups will be conducted a minimum of once per week.

Incremental Backup: Incremental backups will be conducted daily with the exception of the day when a full backup is conducted.

On-Demand Backup: On-demand backups, outside of the normal schedule, can be conducted to support project work with prior approval from the Infrastructure Services team.

Cerner's Kansas City data center is a 113,000 square-foot facility; housing 3 separate 7,500 square foot Data Centers, and is a dual-fed, redundant data operation. Cerner's Lee's Summit data center is a 70,000+ square-foot, dual-fed, redundant data operation. Both facilities operate under supervision 24 hours a day, 365 days a year and are intended to provide uninterrupted power and service for Cerner clients in a secure environment, specifically designed to eliminate client downtime. Contractor ensures redundancy through High Availability of production system servers, also reference section 3.2 of Exhibit N.1-1. Transference/fail-over to Contractor's alternate datacenter is pendant upon County contracting for a Disaster Recovery service. If contracted for DR, Contractor and County will establish the process which will be followed and the circumstances dictating a failover occur.

With our Remote Hosted Option (RHO), your production system is under constant monitoring. Our operations staff is alerted in the event of a problem via an automated toolset. If the issue cannot be resolved promptly, Cerner escalates the issue on your behalf at the 30 minute mark with our internal Immediate Response Center (IRC) and, if appropriate, engages a special escalation team. If you feel you need or warrant additional service than what is being offered, Cerner offers several channels for you to escalate the issue. The Client Relationship Executive (CRE) has ultimate responsibility to your organization. Your CRE is kept abreast of any situations and is your initial point of escalation for you. In addition, there is a geography-based leadership team available to you when needed to handle any service issue you might have, including a Service Delivery Manager who is assigned to your facility.

Cerner installs the service packages in coordination with the client's application management team (or Cerner Consulting). There are several points of monitoring within the hosted solution that we provide. At a high level, both front-end and back-end servers are monitored for utilization, networks are monitored for dropped packet rate and round-trip latency, databases are monitored, interfaces queue depths are monitored, and key aspects of the applications themselves are monitored. Automated response systems and our 24x7 support teams are in place to respond to various alarms.

Cerner publishes major releases every 1-2 years. We offer monthly support updates for our releases. Cerner installs the service packages in coordination with the client's application management team (or Cerner Consulting). Your organization is responsible for testing the new release/update. Typical procedures for moving updated software, such as new service packages, to production require the software to be tested in a non-production domain. Once all software changes have been tested the software is moved from the certification domain to the production domain. Each software package has specific instructions included regarding how the software should be rolled out to the production domain, should the need arise.

Any Change Request that will result in a deviation in the agreed upon design, or additional code to be developed or loaded into the any of the secure BUILD/TRAIN/CERT/PROD environments will be analyzed through the Change Control Process outlined below.

Objectives:

- Ensure consistency in process of documenting change requests

- Define standards for reviewing requests

- Provide mechanism for impact assessment

- Determine necessary approvals needed for sign-off

- To document when change occurred, who executed the change and measures that were taken to ensure the change was successfully applied.

The process steps that will be utilized during the project are provided below.

1. The client identifies an issue or necessary change. They fill out the change request form, which includes an explanation of the need/issue, description/reference number, a proposed solution if known, and suggested integration points, which will be verified by the Cerner Solution Delivery Consultant (SDC).

2. The change request forms are collected and discussed during a weekly team meeting surrounding change control issues. Agenda items for this meeting will include prioritizing issues and discussing any points of integration. This meeting will determine whether these changes will be approved or not approved. It is an internal client meeting with the Cerner Integration Architect in attendance.

3. The approved change requests are tracked on the Change Request Log spreadsheet and then logged as a Service Request to the appropriate Cerner Solution Team via Navigator (our online service request tracking tool). After maintenance training, the Cerner SDC will notify the Client to make the Cerner approved changes.

4. Any additional costs, work effort, scope changes, or timeline impacts will be documented in the Service Request. The Cerner SDC will follow the escalation management process for such issues.

5. The Cerner SDC will communicate to the Client the resolution and the projected implementation timeframe.

6. The Cerner SDC or Client will institute the change in the appropriate environment (BUILD, CERT).

7. The Client Team Leader will be responsible for testing the change according to Unit/System/Integration validation standards laid down in the Test Plan.

8. Once tested, Cerner or Client will move the change to the appropriate domain. The Cerner SDC will follow the Production Environment Change Authorization (PECA) process if the change is needed in the production domain.

9. The Cerner SDC updates the issue/resolution on the SR. The Client updates the issue/resolution on the Change Request Log.

10. The Change Request Log is to be reviewed on a weekly basis by the Cerner Integration Architect and the Client.

11. The Client Team Leader will be responsible for informing the appropriate people regarding training issues, change updates to facility staff, as it relates to the completed change.

12. The Client will retain the paper Change Request forms, along with any supporting documentation, emails, or screen shots (before and after) as a record of change. The Change Request Log will be retained on SharePoint.

Your organization will define needed credentials, and delete specific accounts. Our AMS Service can offer help with any needed additional support.

Discern Explorer can generate output file in many formats including text output that could be imported into Word, and .csv that can be imported into Excel. You can also create .pdf and other types of output.

Should County need to migrate off of the proposed EHR system, we will work with you to establish a data conversion plan. Depending on the other vendor's requirements, Cerner can either send information via HL7 or download table data to .csv that can be imported into Excel.

We have real-time monitoring of the network for intrusion detection. Any breaches or vulnerabilities are acted upon in accordance with their risk and potential impact. Intrusion detection is a core component of the data center infrastructure and data traffic is continually monitored for attacks and anomalies.

Vendor patches are analyzed upon announcement. If the vulnerability is identified as a critical risk factor, and the vulnerability exists within our environment, patch deployment takes place immediately. Otherwise, deployment is deferred until routine distributions are performed.

Information regarding systematic enforcement of access controls is provided in Sections 3.3 and 3.4 of Exhibit N.1-1.

With Cerner's Remote Hosting Option, as opposed to an ASP model, client environments are secured using firewall and router access control layers separating clients into different PVLANS on separate secured systems. Within each system, authorizations to data are managed by application level security. Account information and privileges are stored within the client's database.

P2 Sentinel is our preferred auditing tool for this type of incident.

2.3.5 INTERFACES

Provide Proposer's proposed interface strategy for the EHR System pursuant to Section 1.5 (Interfaces) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 3 pages.

Our interfaces are based upon the Universal Interface Specifications documents which are designed from the various chapters of the HL7 standard. We do not implement off-the-shelf interfaces for a particular vendor/product, but generic interfaces that are configurable and may require some custom scripting. A specification meeting is held early in the implementation phase to discuss functionality of each specific interface. The main objective of the specification meeting is to create a specification document that can be used as a blueprint by the FSI System Analyst (FSI-SA) and as a site-specific reference for our clients. The meeting will detail configurable settings associated with each interface for the client. In some cases, we will implement an ANSI X.12 interface or perhaps a custom interface, if required.Our previous clients utilize the same formats listed above.

Cerner applications use one or more interfaces to communicate with other foreign (non-Cerner) systems that exist within a healthcare organization or to send or receive data from a foreign entity. A specific area in a healthcare organization such as patient registration generally has a "master system" which collects all the data that is required to admit or register the person, such as demographics, insurance and guarantor data, allergies, and so forth. Other systems in various ancillary areas within this healthcare setting have a need to know this information in a timely manner so they can place orders, perform procedures, administer drugs, and so forth.

Interfaces implemented for a specific client are determined by the mix of Cerner and non-Cerner

systems and the data that needs to be exchanged among these systems.

Cerner has implemented approximately 6,000 Millennium interfaces with the major suppliers in the healthcare marketplace for the following types of systems:

- Admission, Discharge, Transfer, (ADT)
- IT or HIS
- Patient care (including medical devices)
- Scheduling
- Physician office
- Financial
- Eligibility checking (stored at the encounter level)
- Transcription
- Coding/Abstracting
- Dietary
- Radiology
- PACs (via Mitra Broker)
- Laboratory
- Reference labs
- Pharmacy dispensing and robotics
- Laboratory devices (instruments) and robotics
- Supply chain

Our integration engine currently meets basic interface monitoring, routing, and customization requirements. Our monitoring tools enable users to easily start, stop, and troubleshoot interface problems. Messages are saved for investigation and can be replayed as needed.

System Integration Manager is a Cerner GUI tool that provides easy access to build, configure, and troubleshoot interfaces. This includes the ability to view message content, errors, and the timestamp.

Sometimes, the most difficult interface problem Cerner faces is an interface specification language barrier between the Cerner system and the foreign system. Cerner may have different terminology for the same issue, or similar terminology for different issues. Another challenge is insuring client has adequate staffing committed to perform the testing required. Cerner has provided the recommended client staffing that is needed for the project to insure success.

Another issue can occur with the timing of the implementation.Too many times we are asked to make the interfaces work before there is a sufficient build of the database on either side(It is important to insure that there is a sufficient build of the testing databases on both sides of the interfaces to insure that the interfaces can be tested properly in integration testing).

Cerner continually reviews their processes to make them better. We continue to add education training programs, literature, and take client advice into consideration to improve our processes.

Cerner's integration strategy uses the same three-layer architecture structure as the other modules of the Millennium system. Our suite of interface software, known as Open Port, can run on the same server as other Millennium applications, or it can run on a separate server, depending on the

configuration of a client system. No third party software is required, but if the client has a third party interface engine, such as eGate, Cerner's interfaces can communicate with it, by sending and receiving transactions.

Cerner's CareAware iBus is the evolution of BMDI's, creating a continuous available and fault tolerant architecture, to support the complete integration of bedside medical devices.

We designed our device architecture to bridge the gap between medical devices and patient information by connecting information from various monitoring devices to the clinician workflow and electronic medical record. As a result, clients can achieve the following:

- Streamlined nursing workflow by incorporating documentation at the point of care
- Consolidated medical device information to support patient safety
- Platform independent, if the devices push data via a network connection or serial port, we can consume data from the device.
- Two-way communication depends on the monitoring medical devices ability to send and receive data.
- Support at least 1000 device connections at the same time without problems
- True plug-and-play device connectivity into the electronic health record

2.3.6 REPORTING APPROACH

Provide Proposer's proposed reporting and analysis capabilities pursuant to Section 1.6 (Reporting Approach) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Discern Explorer is a full-featured, fourth-generation programming language, patterned after Structured Query Language (SQL); therefore, it includes a wide range of powerful commands. Discern Explorer provides over 250 built-in functions and commands specifically written for Cerner Millennium transactions.

All data captured and stored in Cerner Millennium can be accessed using Discern Explorer since all Cerner Millennium solutions use Discern Explorer to write to the Cerner Millennium database. This provides unlimited possibilities for using Discern Explorer to query and report on the Cerner Millennium data. With Discern Explorer you can create anything from simple ad hoc queries, to formatted reports, to complex programs that execute multiple queries, create temporary tables, combine information from multiple queries, flex queries based on user input, create complex expressions, calculate aggregates, and everything in between. The Discern Explorer language is an SQL based language that is proprietary.

Using Discern Explorer, you can extract user-selected information from Cerner Millennium data. You can create extract files in practically any format. Extract files in common formats like comma separated (.csv), fixed column width, and tab or character delimited, are often created using Discern Explorer. The output of Discern Explorer queries can be sent to files such as ASCII, PostScript, .PDF, HTML, as well as label printers such as Zebra and Intermec, and other common file formats. The data then can be imported into other PC applications that use third-party spreadsheet, database, or statistical packages. Discern Explorer allows creation of graphs directly in a report using the Layout Builder. This function eliminates the need to export the data into a third party tool to create graphs.

You can still export the data to third party tools and create graphs if desired.

There are two options to meet the reporting standards required by CCHIT. First, CCL based reports that can be used to meet the reporting needs. These are not very detailed but meet CCHIT requirements. Second, our Audit logging solution, P2Sentinel, provides more detailed reports that meet CCHIT requirements.

Cerner believes that oversight by regulatory agencies is important for ensuring that healthcare environments are reasonably free of risk to patients, visitors, and employees. Cerner is committed to meeting the applicable requirements established by federal law or other applicable regulations. The licensed software will, upon first productive use and during the term of the agreement (so long as your organization is on support), enable your organization to meet the requirements of any applicable federal or state laws in effect on the effective date.

Your organization can use Discern Explorer to write custom reports using any discreet data in the Millennium system.

Cerner has developed a proactive monitoring tool called the Lights On Network. Lights On is a systematic approach to improving system stability through collective knowledge and proven practices acquired through the continual monitoring and management of the Cerner Millennium environments by CernerWorks (Cerner's remote hosting organization).

Our data structure is a relational database, RDBMS. We provide data dictionary information and tools for researching the data models.

The output of Discern Explorer queries can be displayed on the screen and then saved as a comma separated (.csv) file for importing into PC applications. You can create extract files in practically any format using Discern Explorer.

All data in the Cerner Millennium system or custom tables created by your organization can be used in Discern Explorer ad hoc queries. These ad hoc queries can be stored in a file for future use; they also can be created as compiled programs that can be accessed and executed as required.

2.4 APPENDIX J (IMPLEMENTATION REQUIREMENTS)

2.4.1 PROJECT MANAGEMENT

(i) Methodologies and Tools

Provide Proposer's proposed project management methodology for the EHR project, pursuant to Section 1.1(a) (Methodologies and Tools) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Cerner's implementation methodology, MethodM, is our approach to working with clients to deliver value through our Cerner Millennium solutions. MethodM has been used in healthcare organizations ranging in size from single-doctor practices, to health systems, to entire countries. This modular methodology draws upon proven practices from a host of past client experiences. With it, a team is able to deliver the intended outcomes of a project with discipline, predictability and efficiency. But the utility of MethodM goes far beyond your initial deployment. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower

Proposer Instructions

This Appendix of the RFP contains detailed functional requirements for the EHR System desired by the Los Angeles Department of Health Services (LA DHS). Proposers must respond to all the requirements using one of the code provided below.

Response Code	Definition
O (Out of the Box) **C (Customization)** **D (Developed)** **3 (Supplied by Third Party)** **F (Future)** **N (Not provided)**	The Proposer shall indicate how the requirement will be met by checking either: **O**ut of the box, **C**ustomization, **D**eveloped, Supplied by **3**rd party, **F**uture, or **N**ot provided: **O = Out of the box** - The requirement will be met through available functionality and through changes to setting of tables, switches, and rules without modification to the source code. **C = Customization** - The requirement will be met through changes to the existing reports or programs. This would include custom code developed to perform specific functions or validations outside the standard code. Include the creation of a new report, query or workflow that does not exist within the current application. **D** = **Developed** - The requirement will be met by developing new functionality and software code. **3 = Supplied by Third Party -** Requirement will be met by third-party software package and is included in this proposal. **N** = The functionality identified in the requirement will not be provided. Note: In the "Notes" column, next to this response, indicate the name of the proposed third-party software package and indicate the interface/integration services being proposed. **F = Future** - Requirement will be met by packaged software that is currently under development, in Be Note: In the "Notes" column next to this response, indicate the date when requirement will be available

Note:

1. An omitted response will be assumed to be the same as a response code of “N”.
2. Only one (1) response per requirement will be accepted.
3. Any deviation from the response codes will be re-coded at the discretion of the LA DHS.

Requirement #	Requirement	O, C, D, 3, F,N	Notes
General Requirements			
F-1	The proposed EHR System is an overall integrated solution, including the following components: Scheduling, Registration, Order Entry, Results Viewing, Clinical Documentation (physician and nursing), Computerized Physician Order Entry (CPOE), Radiology, Lab, Pharmacy, OR, ER, ICU, HIM Utilization review, and utilization management.	O	
F-2	The proposed EHR System is integrated across the Inpatient and Outpatient continuum of care through workflows, document types and result displays. If a patient has several Outpatient visits and is admitted as an Inpatient, care teams must be able to access the patient's clinical history. Conversely, if an Inpatient is discharged, Ambulatory teams must be able to access the patient's clinical, demographic history.	O	
F-3	The system has the capability to alert physicians during order entry or clinical documentation to identify adverse conditions or to notify physician of actions that need to be taken as part of a requirement as a designed workflow (e.g., co-sign orders for a resident).	O	
F-4	The system has capability to identify the current physical location of any patient during their stay.	O	
F-5	The system has capability to support a purge cycle to allow database maintenance.	O	
F-6	The system has the capability to have an automated recovery.	O	
F-7	The system has the capability for a single point to view complete medical record for both inpatient and outpatient health records.	O	
F-8	The system supports the workflow solution in a teaching hospital for interdisciplinary documentation and allows for multiple e-signatures / authentication across disciplines (i.e., Co-signature of orders / documentation for Resident physicians by Attending physicians)	O	
F-9	The system has capability to support industry standards for Security and Reliability.	O	

F-10	The system has capability of parameter-specific identification of patient problems and goals.	O	
F-11	The system has capability to have a patient education module that addresses the needs of the LA County population (e.g. multilingual, ADA compliant, etc.).	O	
F-12	The system has capability to have voice recognition.	O	
F-13	The system has capability to capture a picture of the patient at the point of service.	O	
F-14	The system has capability to generate alerts if clinical documentation or orders are altered after initial sign-off by an authorized physician.	O	
F-15	The system has capability to capture the date and time the record was entered into the system or edited.	O	
F-16	The system has capability to capture the user's information, both internal and external, who created and/or edited the record.	O	
F-17	The system has capability to perform nursing assessments.	O	
F-18	The system has capability to perform medical assessments.	O	
F-19	The system has capability to automatically populate demographic fields.	O	
F-20	The system has capability to show the patient's medication history.	O	
F-21	The system has capability to manage, track and report user access to a specific patient's data.	O	
F-22	The system has capability to comply with HIPAA Standards for Electronic Transactions.	O	
F-23	The system has capability to integrate the diagnostics from other systems (e.g., fetal monitoring strips, OB strips, etc.)	O	
F-24	The system has capability of importing and export patient demographic data via HL7 interface from an existing Practice Management System, Patient Registration System, or any such system used for patient registration and/or scheduling.	O	
F-25	The system has capability to import, create, review, and edit non-clinical information from the patient record.	O	
F-26	The system has capability to use visual cues to highlight abnormal results.	O	
F-27	The system has capability to accommodate multiple levels of role-based user access that restrict access to the appropriate role.	O	
F-28	The system has capability to display bed census by nurse station, and Provider.	O	

F-29	The system has capability to support electronic signatures and other identifiers for authorization and consent forms. Please include in your response how the system will prompt for the signature as well as where/how it is used for both internal and external user (e.g., patients, staff, providers, witnesses)	O	Cerner's signature solution supports the ability to allow persons to sign electronic documents with a hand written signature on a signature pad or tablet. This electronic signature solution allows persons signatures to be captured on Consent Forms. Once the signature is captured through a USB attached signature pad or a software-based capture on a tablet PC, the signed electronic document is filed into an image repository. Hospital staff and clinicians have access to the signed documents through the person's electronic medical record. The requirements for person e-signature include: Interlink ePad with software; Lexmark Document Producer; Cerner Registration Management; Cerner ProVision Document Imaging; Professional Services
F-30	The system has capability to support the creation of patient identifying bar code on face sheets, patient labels and identification cards with pictures.	O	Partially supported. Identification cards with pictures is not supported.
F-31	The system has capability to provide the creation of user defined prompts, alerts and fields to capture information.	O	
F-32	The system has capability to identify clinicians for the provision of care.	O	
F-33	The system has capability to display age with no greater specificity than days when time of birth is not recorded.	O	
F-34	The system has capability to use age in hours of life when time of birth is recorded including through the 7th day of life.	O	
F-35	The system has capability to allow the recording of an infant's gestational age including age at the time of birth.	O	
F-36	The system has capability to use pediatric-specific reference ranges for vital signs. (e.g., use of metric and US standard units of measure, such as pounds and kilograms)	O	

F-37	The system has capability to document a patient assent for situations where the patient is legally unable to consent.	O	
F-38	The system has capability to document the name of one or more witness(es) to the patient assent.	O	
F-39	The system has capability to document the names and addresses for patient's personal representatives with contact information for each to include one or more telephone numbers and addresses.	O	
F-40	The system has capability to document the date, time and lack of assent or consent in emergency treatment when a legal guardian is not available or present.	O	
F-41	The system has capability for tracking patient ID changes and merges.	O	
F-42	The system has capability to allow multiple users to enter data for a single encounter simultaneously.	O	
F-43	The system has capability to make changes to complete encounters.	O	
F-44	The system has capability to link consult encounters with consult orders.	O	
F-45	The system has capability to have technical modules that collect medical history.	O	
F-46	The system has capability to automatically check for and warn of duplicate orders, within a user-defined period of time.	O	
F-47	The system has capability to electronically provide patient reports on demand following and allow for hiding private information to comply with HIPAA Privacy and Security requirements. Format of reports should include the following: fax, mobile device, pager, electronic storage devices (e.g. flash drive, CDs).	O	
F-48	The system has capability to send a scheduling confirmation to the requesting system.	N	We do not support requests; however, a scheduling notification is sent unsolicited.
F-49	The system has capability to request a scheduling confirmation.	N	We do not support requests.
F-50	The system has capability to designate a primary clinician.	O	
F-51	The system has capability to have rules-based chemotherapy management component.	O	
F-52	The system has capability to display standard orders sets based on diagnosis (e.g. diabetes), including advising for required lab work per quality indicators (A1c, Lipid panel).	O	
F-53	The system has capability to import patient health history data, including obstetrical history data, from an existing system (e.g., eko ,etc.).	O	
F-54	The system has capability to support the capture, graphic display of, and plotting of "Growth Chart" information.	O	

F-55	The system has capability to provide a mechanism to capture history of current illness.	O	
F-56	The system has capability to capture, track and print referral information including the process to accept a referral and to notify the referring source of the acceptance.	O	
F-57	The system has capability to capture, track and print consultations.	O	
F-58	The system has capability to support remote system monitoring technology, such as network access control, performance monitoring,	O	
F-59	The system has capability to access subspecialty attending on-call lists when transferring and receiving patients between hospitals.	O	
F-60	The system has capability to display results in a customizable, intuitive, flexible format.	O	
F-61	The system has the capability to support real-time or retrospective trending and analysis.	O	
F-62	The system has the capability of charting on-screen view of patient process toward meeting clinical goals.	O	
F-63	The system has the capability to maintain a directory which identifies the physician by multiple unique identifiers.	O	
F-64	The system has the capability to allow vital sign/growth data to be normed against either/both male/female gender with transparency to the user regarding which default is being applied.	O	
F-65	The system has the capability to notify user of ED visits.	O	
F-66	The system has the capability to post a note from the web signoff.	N	
F-67	The system has the ability to plot patient results and trends in graph form.	O	
F-68	The system has the ability to upload historical information from both internal and external sources.	O	
F-69	The system has the ability to track and record infection control data and reporting (statistic and/or patient specific).	O	
F-70	The system has the ability to alert staff of patients with highly sensitive Infection Control alerts (e.g., MRSA).	O	
Registration Requirements			
F-71	The system has an Enterprise Registration Module with automated workflow including the processes of registration, admitting, transfers, and discharges in any clinical domain, including hospitals, physician offices, clinics, Ambulatory settings, and home health agencies.	O	

F-72	The system has the capability to integrate and create a unique Master Person Identifier (MPI) that becomes the basis for coordinating the person‘s movement across an integrated or disparate health system.	O	
F-73	The system has the capability to accommodate provider and researcher account types.	O	
F-74	The system has a scheduling/registration product that can add a Newborn scenario including during a downtime scenario.	O	
F-75	The system has a scheduling/registration product that can Add/Modify scenarios (e.g., Inpatient, Outpatient, ER, Quick - Registration, Pre-Admit, series account).	O	
F-76	The system has the ability to Add/Modify person scenarios including: 1) Bed Swap 2) Observation beds 3) Change of service 4) Cancel Encounter 5) Cancel Encounter Discharge 6) Cancel Encounter Transfer 7) Cancel Leave of Absence 8) Cancel Pending Encounter Discharge 9) Cancel Pending Encounter Transfer 10) Complete Encounter Discharge 11) Complete Encounter Transfer 12) Discharge Encounter 13) Leave of Absence	O	
F-77	The system has the capability to use rules associated with required prompts that can either be used as warning to the usre or prevent moving to a next step until a specific action has been taken.	C	
F-78	The system has the capability to generate differencing registration reports.	C	
F-79	The system has the capability to generate bar code labels on laser printers for patient identification.	O	
F-80	The system supports pre-built or easily designed Standard Documents for Armband labels, Sheet labels (Admission label), Face sheets, Admit Notice, Discharge Notice, Transfer Notice, Cancel Discharge Notice, MSP Document, Document Routing printed on laser printer.	O	All reports in your requirement are supported as out of the box (O) with the exception of the following custom (C) reports: MSP Document

F-81	The system generates work lists (queues) including: Medicare Secondary Payer (MSP) Follow-up; Pre-Registration; Dirty Beds; Discharge Follow-up; ER Quick Registration Follow-up; Insurance Verification; Past Due Arrival; Pending Arrival; Leave of Absence View; Unauthenticated Employer; Miscellaneous Insurance; Interpreter Required; Privacy Practice; Accommodation Mismatch; Nurse Unit Inquiry; Name Inquiry.	O	All work lists in your requirement are supported as out of the box (O) with the exception of the following custom (C) reports: Unauthenticated Employer, Miscellaneous Insurance, Privacy Practice, Accommodation Mismatch, Nurse Unit Inquiry, Name Inquiry
F-82	The system has the capability to register a large number of patients who arrive at the ER (QuickReg) as a result of a disaster involving casualties (e.g., train accident, earthquake, etc.).	O	
F-83	The system allows to search for and potentially match QuickReg records with existing patient records in the system.	O	
F-84	The system assists matching records created in the quick registration process with existing record for the same patient.	O	
F-85	The system allows authorized users to merge matching records		
F-86	The system supports patient locator functionality such as viewing of patients and their location for information or help desk. Includes the ability to customize so that only those patient classes a facility desires will show up on the locator; also includes the capability to indicate which patients want to opt out of being listed in the patient directory.	O	
F-87	The system supports historical patient lookup functionality such as viewing a patient's locations (e.g., where they have been transferred to and from; view of all patients who have historically been in a given location during a time period).	O	
F-88	The system supports bed board functionality such as providing a view of beds including their status and occupancy information at either the nurse unit level or for an entire site.	O	
F-89	The system supports the Bed Board application of transfer and discharge patients, as well as to update the status of a bed.	O	
F-90	The system has the capability to allow multiple addresses, permanent and temporary.	O	
F-91	The system has the capability to import, create, review, edit, and export patient demographic information.	O	
F-92	The system has the capability to conduct eligibility checking and documenting for all commercial health plans and Medicaid.	O	
F-93	The system has the capability to print out medical summary.	O	

F-94	The system has the capability to access insurance information from within the system; and determines proper billing codes including administration codes (i.e., vaccine, shots, etc.).	O	
F-95	The system has the capability to provide a Worklist component to handle list of incoming scheduling requests, including urgency of appointment.	O	
F-96	The system has the capability to send transportation requests.	O	
F-97	The system has the capability to capture and display separate physician names for attending, admitting, consulting, referral, and primary care physician at the visit level.	O	
F-98	The system has the capability to capture and display comments in the form of comment fields (free form text and pre-defined values/notes).	O	
F-99	The system has the capability for notification of IP Admissions.	O	
Scheduling Requirements			
F-100	The system has the capability to optimize the scheduling of persons, staff, and other resources, reducing costs and dramatically increasing efficiency in this key area of access services.	O	
F-101	The system manages multiple resources or other appointment books displayed together.	O	
F-102	The system supports scheduling for Physical Therapy, Occupational Therapy, Rehabilitation Therapy areas and all Radiology modalities.	O	
F-103	The system supports scheduling for the appointment types.	O	
F-104	The system supports scheduling for multiple slot types.	O	
F-105	The system has the capability to support default schedules utilizing more than one slot type that is used to predefine the use of time for a resource. The system will need the support capability of up to and beyond 5000 default schedules.	O	
F-106	The system allows scheduling templates in the future.	O	
F-107	System functionality exists that allows the capture of additional information regarding requested appointment type, such as reason for exam, ICD-9/ICD-10 codes, referring physician, etc.	O	
F-108	The scheduling/registration Module has the capability to flex the details captured for a selected appointment type. There is no limitation to the number of accepted formats.	O	
F-109	Resource roles are logical groupings of resources used primarily to assist with database maintenance. The proposed EHR System is able to manage the resource roles necessary to support the environment similar to LAC DHS.	O	

F-110	Resource Lists is functionality to define a list of resources that are valid to be scheduled to a certain appointment type. The proposed EHR System is able to manage the resource lists necessary to support the environment similar to LAC DHS.	C	
F-111	The system has the capability to upload historical schedules.	N	Cerner can upload active schedules only or those scheduled for the future.
F-112	The system has the functionality to define a list of resources that are valid to be scheduled to a certain appointment type. This will need to include multiple resource lists.	O	
F-113	The system has functionality to indicate if multiple appointments interact when booked too closely together.	O	
F-114	The system addresses Preparations, Guidelines, and Post Appointment Instructions.	O	
F-115	The system has the capability to utilize Action Comments; Booking Notes; Scheduling Comments; Warning Overrides; Resource Comments; Encounter Comments; Person Comments.	O	
F-116	The system utilizes the capability to capture referral info at the time the appointment is being made and the ability to display the information when viewing details of the appointment.	O	
F-117	The system utilizes the capability to capture (at the time of patient discharge) diagnosis codes, procedure codes, caregivers, responsible physician, disposition, and any charges.	O	
F-118	The system integrates the use of registration conversations and conversation flexing logic for Radiology Integration including capability to schedule radiology patient appointments: Surgical Management Integration including capability to assign surgical case numbers; evaluate historical and recent procedure durations; apply preference cards to the scheduling process; perform dynamic and block scheduling.	O	
F-119	The system has functionality for Enterprise Eligibility/Enterprise Benefits Management Integration which includes capability to verify insurance eligibility information during the scheduling process and capability to check for the medical necessity of procedures based on diagnosis combinations.	O	
F-120	The system addresses Orders Integration such as Scheduling to orders.	O	

F-121	The system has the capability to link orderable to scheduling appointments, which can create the order in future status until appointment check-in; Orders to Scheduling: The system has the capability to support Radiology procedures that need to be scheduled and are ordered in Electronic Health Record product.	O	
F-122	The system has functionality for scheduling request queues that prompt user to make registration appointment if any outpatient appointment has expiration prior to next appointment visit.	N	
F-123	The system has the capability to by-pass need for financial assessment appointment based on patient referral type.	N	
F-124	The system has functionality/capability at Patient Arrival that would restrict patient check-in from occurring before the date of the appointment.	N	
F-125	The system has functionality for "View only access/Full Access" including capability to restrict scheduling based upon location.	O	
F-126	The system has the capability and workflow to Schedule Multiple Appointments, Schedule a Recurring Appointment, Add a Patient while entering appointment information, Reschedule an Appointment, Cancel an Appointment, Check In an Appointment, Check Out an Appointment, Record a No Show, and View the History of an Appointment.	O	
F-127	The system has the ability to schedule a referral patient (non-registered) and collect associated documentation for the referral.	N	
F-128	The system has a process for archiving and/or purging of data.	C	
Clinical Documentation Requirements			
F-129	The system has the capability to automate the following processes for Nursing or Ancillary Departments: Admission Process; Ongoing Assessment Process; Intake and Output; Routine Care and Functional activities; Non Scheduled Documentation such as Ad Hoc Charting; Shift Change Report; Patient Assignment; Results Viewing.	O	
F-130	The system has the functionality to facilitate the need to automate the intake and output flow sheet calculations along with fluid balance in a graphic view.	O	
F-131	The system has functionality that addresses Results Viewing and facilitates the need to automate the custom views for clinical modalities such as Nursing, Physician, Administration, and Ancillary Departments.	O	

F-132	The system has the functionality to address Shift Assignment: The product will need to include the functionality to automate the Assignment of patients to a group of care givers or an individual care giver. Provide a high level overview of key information, notification source, for important interval data and a launch pad to vital and related applications.	O	
F-133	The system has the functionality that addresses Task Lists: • Product functionality to facilitate the need to automate the Nursing and departmental documentation tasks including single and multi-patient task lists utilized to support Nursing and departmental processing. • Functionality to include a unique task list for each defined position. • Task list functionality to support forms documentation along with complete/incomplete charting.	O	
F-134	The system has the capability to automate the following reports: Active Order Report; All Task Report; Overdue Task Report; Diet Report; Intake and Output Summary; Report that can flex to utilize 8 and 12 hour versions for Shift Assignment Reporting. Also functionality for Charge Services/Documentation Management to support at the capture of charges based upon the completion of tasks.	O	
F-135	The system has the capability to present to a user condition specific care plans or guidelines based on vital signs outside of a specific range.	O	
F-136	The system has the capability to specify the level of authorization to make decisions on behalf of the patient and to designate primary and secondary caregivers.	O	Partially supported. Clinicians can record the Durable Power Of Attorney, DPOA, and scan the legal DPOA papers into the chart. Our system requires that all caregivers designate their relationship to the patient such as attending provider, admitting provider, primary care provider. While Cerner a Document Imaging solution it has not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.
F-137	The system has the capability to produce adverse-event reporting and documentation.	C	

F-138	The system has the capability to inform the clinician of recommended or required immunizations based on patient risk factors and other criteria as identified in widely accepted immunization schedules and recommendations.	O	
F-139	The system has the capability to record the date and time (if known) of vaccine reaction or allergic occurrence.	O	
F-140	The system has the capability to calculate Body Surface Area and support (BSA)-based dosing when recommended for a medication.	O	
F-141	The system has the capability to resolve dosing based on weight or BSA to a finite dose.	O	
F-142	The system has the capability to use a weight-based or BSA-based dose that is entered ad hoc and subsequently be able to resolve such entered doses to finite doses.	O	
F-143	The system has the capability to document Admission History using documentation templates. The EHR System needs to provide the functionality to carry forward previous visit history into the current visit template.	O	
F-144	The system has the capability to customize template fields to be tied to standard nomenclature.	O	
F-145	The system has the capability for front-end speech recognition integrated into documentation tools.	O	
F-146	The system has the capability to integrate images directly into documentation.	O	
F-147	The system has the capability to select diagnoses, medications, and procedures from pre-defined lists.	O	
F-148	The system has the capability to quickly update care plans.	O	
F-149	The system has the capability to have supervisory review integrated into documentation workflow.	O	
F-150	The system has the capability to track ancillary documentation.	O	
F-151	The system has the capability to have template-driven charting.	O	
F-152	The system has the capability to provide documentation templates to support Anti-coagulation/Coumadin Management.	O	
F-153	The system has the capability to provide documentation templates to support Psychiatry, Orthopedics, Oncology, Pre-Operative Assessment, History and Physical, Physical Exam, Operative Note, Labor and Delivery, Cardiac Resuscitation, Dental Note, Ophthalmology Note, Family Planning, Urology Record, Sickle Cell Record, Neurology Note.	O	
F-154	The system has the capability to support resident/attending signoff relationships and attestation. (Co-signature workflow)	O	

F-155	The system has the capability to provide messaging system for all clinical results. This would include examples like placing a record of result review and acknowledgement in patient's chart.	O	
F-156	The system has the capability to automatically shift results message streams to new caregiver for sign out purposes.	O	
F-157	The system has the capability to Integrate with pager, cell phone, and email technologies to provide critical results reporting in real time.	O	
F-158	The system has the capability for an escalation process for critical results if not acknowledged in a specified time frame.	O	
F-159	The system has the capability to track active and inactive patient problems.	O	
F-160	The system has the capability for automatic problem generation based on diagnoses in medical record.	O	
F-161	The system has the capability to integrate CPT & ICD-9/10 Codes. Solution-provided aids for completing the template based on entry.	O	
F-162	The system has the capability to print clear summary for patients on discharge.	O	
F-163	The system has the capability for consolidated vital signs management across all service areas.	O	
F-164	The system has the capability to provide patient acuity classification score and other scoring tools (e.g., pain scores).	O	
F-165	The system has the capability to have field (entry) level edits and validation checking capability.	O	
F-166	The system has the capability to make nursing assignments.	O	
F-167	The system has the capability to flag the nurse for missing or late documentation.	O	
F-168	The system has the capability to allow multiple users to view and update the same record simultaneously.	O	
F-169	The system has the capability to provide knowledge references.	O	
F-170	The system has the capability to have patient education library.	O	
F-171	The system has the capability to customize handouts from print or email.	O	
F-172	The system has the capability to have immunization registry function.	O	
F-173	The system has the capability to capture & store risk factors for each new patient.	O	
F-174	The system has the capability to capture & store social history elements.	O	

F-175	The system has the capability to prompt clinicians to provide appropriate patient counseling, e.g., counsel patients on behavior, following treatment plans and taking medications.	O	
F-176	The system has the capability to prompt the provider to inform the parent/child that their immunization information will be shared with the registry and Integrated Decision Support.	O	
F-177	The system has the capability to record progress notes utilizing a combination of system default, provider customizable, and provider-defined templates.	O	
F-178	The system has the capability to automatically update other sections of the record with data entered in the progress note.	O	
F-179	The system has the capability to enter performed and planned procedures on the progress note template after an encounter.	O	
F-180	The system has the capability to link the progress note to a diagnosis or a problem number	O	
F-181	The system has the capability to automatically capture the electronic signature and title of the person entering data and date/time stamp each transaction.	O	
F-182	The system has the capability to view progress notes in chronological or reverse chronological order by encounter date in relation to the active care plan.	O	
F-183	The system has the capability that applies security controls to progress notes to ensure that date cannot be deleted or altered except within the current session and by an authorized user.	O	
F-184	The system has the capability to include a medical terminology dictionary within the progress notes data entry module.	O	
F-185	The system has the capability to include a spell checker within the progress notes data entry module.	O	
F-186	The system has the capability to support the automatic collection of data elements defined by the associated clinical practice guideline or order.	O	
F-187	The system has the capability to provide a problem status for each shown problem.	O	
F-188	The system has the capability to separate active from inactive problems.	O	
F-189	The system has the capability that allows clinicians to identify and record new patient problems as well as the current status or existing problems.	O	
F-190	The system has the capability to update the active problem list from relevant data in the progress note.	O	

F-191	The system has the capability to create, review, and edit information regarding a change on the status of a problem to include, but not be limited to, the date the change was first noticed or diagnosed.	O	
F-192	The system has the capability to automatically update the diagnosis/problem lists with the capture of each new piece of patient data in any module.	O	
F-193	The system has the capability to automatically link problems with order and results.	O	
F-194	The system has the capability to automatically update the problem summary using new clinical information.	O	
F-195	The system has the capability of allowing the display of past interventions for review at the option of the provider.	O	
F-196	The system has the capability of allowing the display of past hospitalizations, diagnostic procedures, & past therapies for review at the option of the provider.	O	
F-197	The system has the capability to automatically update the problem summary lists upon detecting changes made to mutli-disciplinary guidelines.	O	
F-198	The system has the capability allow users overriding all or parts of a system provided guideline or protocol and prompt the user to indicate a reason for the override.	O	
F-199	The system has the capability to import/create information about the desired single or multi-disciplinary long/short term goals and objectives that will be accompanied by the care plan.	O	
F-200	The system has the capability to review, edit information about the proposed set of single or multi-disciplinary care plan options that are based upon expected outcomes.	O	
F-201	The system has the capability to use existing documentation templates.	O	
F-202	The system has the capability to integrate all patient forms with electronic capture of the patient's signature.	O	Our patient signature and scanning solution is available from Cerner but more detailed scope information is needed to be properly configured.
F-203	The system has the capability to view assigned patients, utilization trends, on-call schedules on a dashboard.	O	
F-204	The system has the capability for users to create their own preferred display formats.	O	
F-205	The system has the capability to display & print care plan by patient, nurse, physician, treatment type.	C	Your organization can define custom reports to support the printing of care plan data.

F-206	The system has a solution for nursing and physician shift handoff that integrates documentation, results, and progress notes along with workflow sign off to efficiently and safely hand off patients to the next shift.	O	
F-207	The system has the capability for communication that will identify clinical teams and/or individual physicians on the team (Residents and/or Attending) so that if needed, the team/individual physician can be contacted by a covering physician.	O	
F-208	The system has the capability to auto translate based on documentation entered, prompt for additional supporting documentation and prompt for pertinent documentation (e.g., present on admission for optimal Medical Records coding).	O	
F-209	The system has the capability to provide computer aided coding for staff as forms and templates are completed.	O	
F-210	The system has the capability to accept scanned documents and convert to a template to be used by other medical professionals.	O	Cerner ProVision Document Imaging is a distributed application that provides electronic document imaging services and interactive display of textual and other types of documents, as well as scanned images of documents via a variety of Cerner Millennium applications or as a standalone solution. Original documents can be captured from a variety of different media, converted to digital format for viewing and archived for long-term storage. This solution is available from Cerner but more detailed scope information is needed to be properly configured.
F-211	The system has the capability for user-defined patient flow sheets.	O	
F-212	The system has the capability to download branching logic charting methods.	O	
F-213	The system has the capability to provide a detailed outcome reporting to analyze and determine best practice.	C	
Order Management Requirements			
F-214	The system has the capacity of an 'enterprise clinical viewer' for viewing clinical results (e.g., pediatric growth charts, visit lists and others).	O	
F-215	The system has the capability for clinical views of order sets, i.e., by care venues (Inpatient and Ambulatory), specialty or treatment plan.	O	

F-216	The system has the capability to view patient charts including result flowsheets, clinical notes, patient information and demographics, problem lists, pediatric growth charts, visit lists.	O	
F-217	The system has the capability to allow the creation of nursing orders, physician orders and order sets.	O	
F-218	The system has a process flow for Laboratory orders; Radiology orders; Therapy orders and pharmacy orders.	O	
F-219	The system has the capability to address duplicate order checking.	O	
F-220	The system has the capability to provide order status updates during the processing of an order.	O	
F-221	The system has the capability to handle order communication within the integrated modules (Rad/Lab/Rx) along with communication to any potential interfaced modules.	O	
F-222	The system has the capability to have 'write rules' against order entry conditions by users across the unified database, including lab, Radiology, Angio, Respiratory, etc.	O	
F-223	The system has the capability to have exam protocols.	O	
F-224	The system has the capability to automatically notify caregivers if critical value is detected and document who acknowledged the receipt of notification, as well as the date/time.	O	
F-225	The system has the capability to create, fill-in & e-fax customized order forms.	O	
F-226	The system has the capability to accept orders from multiple locations.	O	
F-227	The system has the capability to accept, override, and cancel an order.	O	
F-228	The system has the capability to detect duplicate orders issuing visual and auditory warnings.	O	Partially supported. Visual warnings are available; however, auditory warnings are not supported functionality.
F-229	The system has the capability to download the treatment clock.	O	Orders can include future initiate, default phase status, phase offsets, scheduling integration, and estimated start date/time. Additionally, with our Oncology solution, we have our Treatment Schedule and Copy Forward functionality to minimize the ordering input needed from physicians for multiple days, multiple cycles chemotherapy protocols.
F-230	The system has the capability for a user to create and manage care plans.	O	

F-231	The system has the capability to override the warning after entering a justification for the override.	O	
F-232	The system has the capability to supplement standard order sets with additional information.	O	
F-233	The system has the capability to allow entry of multiple orders or requests for services in one order session without reentry of basic information.	O	
F-234	The system has the capability to notify multiple departments with single order and required equipment support transmitted.	O	
F-235	The system has the capability to support the inclusion of Kardex-type of information.	O	
F-236	The system has the capability to modify care plan/interventions based on newly assigned caregiver or medical orders or new diagnosis.	O	
F-237	The system has the capability to document reason for verbal order.	O	
F-238	The system has the capability to automatically notify providers of outstanding verbal orders needing signature.	O	
F-239	The system has the capability to flag all unsigned orders.	O	
F-240	The system has the capability to periodically remind provider of unsigned orders.	O	
F-241	The system has the capability for an automatic pre-notification to Ordering Clinicians that order will stop.	O	
F-242	The system has the capability for an automatic escalation if notification is not acknowledged prior to stop time.	O	
F-243	The system has the capability to enter an order with more than one occurrence and to specify the number of occurrences and/or dates/times/intervals for the occurrences.	O	
F-244	The system has the capability for integrated results with automatic notification and a single location to view all results.	O	
F-245	The system has the capability to cause an "alert" in performing department for STAT orders and process immediately.	O	
F-246	The system has the capability for automatic escalation if "Abnormal" Alerts are not acknowledged.	O	
F-247	The system has the capability to allow medications to be ordered by brand and generic names.	O	
F-248	The system has the capability for conditional orders that are activated based satisfaction of their conditions.	O	
F-249	The system has the capability to capture orders using pre-define orders sets and "sliding scale orders".	O	

F-250	The system has the capability to generate relevant requisition numbers, registration numbers, etc. to enable closed-loop tracking with relevant source system.	O	
F-251	The system has the capability to require that all orders be digitally signed and date/time stamped at the completion of each order.	O	
F-252	The system has the capability to assign and display an order number for active, hold, and pending orders.	O	
F-253	The system has the capability to require a justification for overriding, changing and canceling an order prior to be allowed to continue.	O	
F-254	The system has the capability to enable selected orders to be recurring orders.	O	
F-255	The system has the capability to look up contact information for providers, departments, pharmacies, and other entities.	O	
F-256	The system has the capability to automatically cancel active orders following discharge.	O	
F-257	The system has the capability to automatically generate notification of cancellation to the appropriate department(s).	O	
F-258	The system has the capability to change order priority after order entry/verification, with prompt for reason.	O	
F-259	The system has the capability to provide an on-line inquiry/display of all or selected patient orders.	O	
F-260	The system has the capability to support suspension of orders upon transfer with selective reactivation and countersignature by the receiving medical care provider.	O	
F-261	The system has the capability to support countersignature of order written or discontinued by a medical student or unauthorized consultant for which activation is held pending the countersignature.	O	
F-262	The system has the capability to enter orders for preadmission and pre-registration patients, including ability to define the activation date for the order and to bill to the future encounter.	O	
F-263	The system has the capability to flag orders if not in compliance with medical necessity (as defined by entity, facility, or department).	O	
F-264	The system has the capability to customize pre-notification lead time.	O	
F-265	The system has the capability to provide automatic notification of integrated results.	O	

F-266	The system has the capability to provide visual user alerts in the form of po-ups, color codes etc. at the point of data entry and when displaying information on the screen.	O	
F-267	The system has the capability that in the event that an order has been made to an incorrect patient that they order could be moved to the correct patient.	O	
F-268	The system has the capability to require medium and high severity alerts due to medication counter indications to be approved by the pharmacist.	O	
F-269	The system has the capability to incorporate institution defined rules into order entry function.	O	
F-270	The system has the capability to support the special needs of order entry in the Emergency & Operating Room.	O	
F-271	The system has the ability to incorporate charging and workload methodology with order entry.	O	
F-272	The system has the ability to display critical relevant data when creating orders. (e.g., CT exam, BUN, Creatinine, liver enzymes)	O	
F-273	The system has the ability to enter multiple orders at the same time without the need to re-select PT from a list or re-enter PT ID information.	O	
Clinical Decision Support Requirements			
F-274	The system has the capability to create algorithm charts for common situations and procedures.	O	
F-275	The system has the capability to provide alerts and reminders based on predefined clinical guidelines	O	
F-276	The system has the capability to have decision support capabilities and alerts that identify the reason for the alert, relevant trigger data, severity/risk, and Integrated Decision Support.	O	
F-277	The system has the capability to queue notification of consultation needed to the consultant and to notify the user of consult completion, including consult note.	O	
F-278	The system has the capability to track and report number of consultations requested and number performed per physician.	C	
F-279	The system has the capability to withhold an encounter from being closed without certain data fields completed.	O	
F-280	The system has the capability to differentiate result notes from other types of visit notes.	O	
F-281	The system has the capability to provide system-wide quality reporting and physician specific performance feedback.	C	
F-282	The system has configurable protocols and alerts for each disease entity.	O	

F-283	The system has the capability to capture the data and the reports available to meet the National Patient Safety Goals. Of specific concern are the patient Safety Goals that address infection control (e.g., central line infections, surgical site infections).	O	
F-284	The system has the ability to flag or identify patients that meet criteria for clinical studies.	O	
F-285	The system has the ability to integrate order sets, pathways or regulatory core measure criteria with prompts to provider for usual practices/expectations and method of documenting a deviation from usual or expected practice.	O	
Pharmacy Requirements			
F-286	The system has the capability to view lab results during the pharmacy order process flow.	O	
F-287	The system has the capability to address verification of order by Pharmacist, as well as address duplicate Therapy checking; drug to drug interaction checking; drug to allergy checking; drug to food interaction checking.	O	
F-288	The system has the capability to address soft and hard stop on orders defined by LAC/DHS policies and procedures.	O	

F-289	The system has the capability to address Chart Lock functionality for medication orderings. • IV Admixture compatibility; o Scoping of Frequencies at the Nursing Unit o Contra-indication checking; • Print outs of patient information in the form of Leaflets. • Capability to enter free text medications. • Capability to modify a medication order when the original order is modified including new parameters applied and a new signature applied to the order. o TPN o Multi-ingredient IV ordering Order Catalog as part of the eMAR o Virtual views o Rx Masks o Rx synonyms o Order Entry Formats • Creation of on-line MAR and IV documentation • Charge on order/administration • Documentation of an on-line MAR o IV Charting o IV rate o Infuse Over Calculations • Capability to view discharge Meds Profile as well as inpatient meds profile o Sliding Scale ordering o Weight Based dosing o Rx order Sentences o Medication orders o Physician co-sign for medications • Capability to handle medical student orders/new orders	O	
F-290	The system has the capability to address pharmacy clinical documentation.	O	

F-291	The system has the capability to address: • Pharmacy Reference Data including dispense Categories • Dosage Forms • Frequencies • Label Comments • Order Alerts • Price Schedules • Reason Codes • Routes of Administration • Units of Measure	O	
F-292	The system has the capability to address departmental Orders for Inpatient medications.	O	
F-293	The system has the capability to support pre-defined defaults for order details.	O	
F-294	The system has the capability to address formulary items.	O	
F-295	The system has the capability to address pharmacy label formats.	O	
F-296	The system has the capability to support Standard IV Label; Standard Medication Label; Standard Self Med/Pass Med Label; Standard Oral Syringe Label; Standard Outpatient Label.	O	All label types listed are supported with the PharmNet solution with the exception of Outpatient labels. Those labels are provided with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-297	The system has the capability to address medication administration processing.	O	

F-298	The system has the capability of providing the following reports: • Standard Profile Pharmacy Medication • Standard Stop Order Report • Standard Worklist Report • Standard Checklist Report • Drug Inquiry • Special Status Inquiry for non-formulary meds • Order Action Workload by site and location • Order Action Workload by site and user • Dispense Categories Workload by site and user • Dispense Categories Workload by site and location • Pharmacy Billing Journal • Drug Utilization Report • Formulary Analysis • Interaction Alert Views • Order Action Analysis • Order Dispense Analysis • Product Dispense Analysis	C	

F-299	The system has the capability to utilize pharmacy industry standardized databases that include: • Basic drug information • Drug-drug interactions • Drug-food interactions • Drug allergy/allergic cross-reactivity checks • Therapeutic duplication • Pharmacology Side effects/toxicities • Warnings • Pregnancy hazards • Lactation hazards • Therapeutic categorization • Consumer drug education (English & Spanish) • Warning labels Brand/generic name • Formulations • Routes • Orange book codes • AWP Drug pricing • Pediatric and adult order sentences content • Dose-range checking content based on patient parameters such as age and weight	O	All of these items are available. However, while Orange Book codes are in the database, they are not utilized within the PharmNet solution.
F-300	The system has the capability to address Dose Range Checking including alerts presented to Pharmacy users during Order Entry to ensure medication order doses are within safe and effective ranges; Dose-range checking (age- and weight-specific); Checking performed on medication, PRN, and intermittent orders for single doses, daily doses, and length of therapy on order-by-order basis.	O	

F-301	The system has the capability to support decision support rules for pharmacy orders including: • Validating have data in Height, Weight and Allergy fields • Standard IV/PO switch that can recommend a switch from an expensive IV medication to a more cost effective oral equivalent • Standard IV/PO WBC Switch that recommends a switch from an expensive IV medication to a more cost effective oral equivalent when the White Blood Cells falls within normal ranges • When ordering renally excreted, or nephrotoxic, medication for a patient with a recent creatinine result that indicates impaired renal function, a dosage adjustment is recommended • Alert evokes when renally excreted drug is ordered	O	
F-302	The system has the capability to address the need for an Electronic Medication Administration Record (EMAR).	O	
F-303	The system has the capability to provide a list and description of all fields in the drug record Formulary file.	O	
F-304	The system has the capability to alert the user of any Drug - Drug interaction, Food - Drug interaction, Drug - Disease interaction, Drug - Allergy interaction.	O	
F-305	The system has the capability that provides the user the ability to add and/or edit the interaction alerts.	O	
F-306	The system has the capability that provides the user the ability to delete the interaction alerts on a drug by drug basis.	N	Based on preference settings the severity of alerts seen can be defined. However, there is not a way to turn off or delete an alert on a drug by drug basis. In addition to reducing the amount of alerts through severity settings, once the alert is presented to the clinician it can be ignored and the ordering conversation can continue.
F-307	The system has the capability to capture true allergies and reactions to allergies differently from drug intolerances as discrete data.	O	We support the ability to enter allergy/intolerance descriptions.
F-308	The system has the capability to have pre-notification occurrence prior to order stop time.	O	
F-309	The system has the capability to have automatic notification of customized "abnormal" alerts.	O	
F-310	The system has the capability for to record, manage and report on patient allergies.	O	

F-311	The system has the capability for medication therapy monitoring.	O	
F-312	The system has the capability for order entry form on one screen including unit dose and IV.	O	
F-313	The system has the capability to have order verification for technician order entry.	O	
F-314	The system has the capability to identify floor stock items for each patient care units (such as Pyxis items).	O	
F-315	The system has the capability to re-schedule, suspend, discontinue IV orders.	O	
F-316	The system has the capability to build tapering doses.	O	
F-317	The system has the capability to "lock down" orders that are restricted to specific groups of physicians/services or alerts defined by user.	O	
F-318	The system has the capability to automatically stop and/or hold order.	O	
F-319	The system has the capability to generate cart exchange, fill list, IV picking, IV fill list.	O	
F-320	The system has the capability to provide on-line drug information.	O	
F-321	The system has the capability to have a controlled substance tracking.	O	
F-322	The system has the capability to have drug utilization reporting.	O	
F-323	The system has the capability to add and/or edit medications.	O	
F-324	The system has the capability to add drips.	O	
F-325	The system has the capability to add and/or edit hemodynamic data elements.	O	
F-326	The system has the capability to view on demand the patient's current/active medications.	O	
F-327	The system has the capability of dose and age range checking.	O	Cerner supports dose range checking based on age, weight, body surface area, and renal function.
F-328	The system has the capability to generate patient medication profile for decentralized clinical pharmacist.	O	
F-329	The system has the capability to implement user-defined drug restrictions.	O	
F-330	The system has the capability (at the user/administrative level) to add all new vaccine products and antigens to the system's immunization (tracking) data base.	O	
F-331	The system has the capability to record the date and time (if known) of vaccine reaction or allergic occurrence and display an alert if the user orders a subsequent vaccine type.	O	

F-332	The system has the capability to display an alert if the user orders a subsequent vaccine type recorded under the vaccine reaction or allergic occurrence.	O	
F-333	The system has the capability to present structured Allergy information to support the medication ordering process.	O	
F-334	The system has the capability to automatically alert and receive response back from the provider missing data required to compute a dose (e.g., dose type).	O	
F-335	The system has the capability to automatically alert and receive response back from the provider with invalid data required to compute a dose (e.g., dose type).	O	
F-336	The system has the capability to alert the user when a maximum individual or daily dose would be exceeded.	O	
F-337	The system has the capability to capture and display the approximate date/time of the allergy occurrence as well as capturing allergy symptoms (e.g., rash, fever, chills).	O	
F-338	The system has the capability to capture food/environmental allergies as discrete data.	O	
F-339	The system has the capability to provide tool to facilitate reconciliation of patients' medications (past and present) across the continuum of care.	O	
F-340	The system has the capability to allow automatic addition of medications based on orders and prescriptions.	O	Inpatient pharmacy supports the addition of medications based on orders. Prescriptions will be supported in the future with the Etreby Retail solution. This will be a part of the fill notification message. Etreby is currently in the process of being contracted for by the County.
F-341	The system has the capability to have reminders to clarify similar medications on the active list.	O	
F-342	The system has the capability to view patient Immunization List.	O	
F-343	The system has the capability to display Med List by on-going vs. one-time medications.	O	
F-344	The system has the capability to have the easy closed-loop medication refill process that allows nurse to get online approval from physicians.	O	
F-345	The system has the capability for calculation of common medication dosages by weight.	O	

F-346	The system has the capability for dose range checking against established ranges for weight, age and other conditions.	O	PharmNet provides dose range checking based on patient age, patient weight, frequency of administrations, units of measure (including BSA calculations), and route. Discern Expert alerts can be defined by your organization to place conditional orders based on age, gender, diagnosis, and more.
F-347	The system has the capability for seamless integration with MAR, paper and on-line.	O	
F-348	The system has the capability to alert the user of lookalike and sound alike drugs.	O	
F-349	The system has the capability for automatic volume calculations, flow rates and compounding information.	O	
F-350	The system has the capability to interface with Bar Code medication administration system.	O	
F-351	The system has the capability to interface with Automated Dispensing cabinet.	O	Cerner systems were specifically designed to facilitate and support direct interfaces to a wide range of automated medical devices, cabinets, and dispensing stations. Cerner supports pharmacy device interfaces that meet HL7 standards. In addition, we also have our own automated dispensing devices called RxStation which are integrated with all Cerner Millennium modules.
F-352	The system has the capability to generate 3D or 2D bar-coding labels, recodes, forms and MARs.	O	
F-353	The system has the capability for on-line pharmacy intervention, ADR and ADE documentation.	O	
F-354	The system has the capability to reverse, modify, and resubmit prescription refill claims online.	O	
F-355	The system has the capability for the critical care solution to support IV drip conversions from within the flow sheet view.	O	
F-356	The system has the capability to graph titrated IV drips against blood pressure and heart rate.	O	

F-357	The system has the capability to document patient problems, medications, medication reconciliation, and allergies/ADRs in the EHR, which provides the ability to manage each of these list-types.	O	
F-358	The system has the capability to review patient problems, medications, medication reconciliation, and allergies/ADRs in the EHR, which provides the ability to manage each of these list-types.	O	
F-359	The system has the capability to update patient problems, medications, medication reconciliation, and allergies/ADRs in the EHR, which provides the ability to manage each of these list-types.	O	
F-360	The system has the capability to have ePrescribing capability to document and store physician and patient info and SIG.	O	
F-361	The system has the capability on its medication module to access the National Drug Classification (NDC) database.	O	
F-362	The system has the capability for a use to document the effectiveness or ineffectiveness of a medication in the form of comments, notes or by using a qualitative or quantitative scale.	O	Your organization can create documentation to support discrete and mandatory data fields. There is also a free text field to enter in free text comments if necessary.
F-363	The system has the capability of storing repeat prescription information.	O	
F-364	The system has the capability for a user to retrieve prescription order information that has been previously entered in the system.	O	
F-365	The system has the capability for medication management: Ordering, Acknowledging of order, pharmacy review filling of medication and the documentation of admission.	O	
F-366	The system has the capability for drug monographs.	O	MediSource content as well as patient education leaflets can be accessed from PowerChart.
F-367	The system has the capability to support the IVR process through the Retail Pharmacy solution.	O	This is supported with the Etreby Retail solution. Etreby interfaces to IVR vendors. Clients are able to select the vendor that best meets their needs. Etreby is not proposed in the response. However, Cerner's Etreby solution is currently in the process of being contracted for by the County.

F-368	The system has the capability to support written prescription image capture through the Retail Pharmacy solution.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-369	The system has the capability to support interfaces to pharmacy automation through the Retail Pharmacy solution.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-370	The system has the capability to define printer routing for printing missing doses and MAR.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-371	The system has the capability to monitor adverse drug reaction.	O	
F-372	The system has the capability to batch refill.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-373	The system has the capability to return to stock processing.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-374	The system has the capability to support all refills to be processed at a central location.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-375	The system has the capability to import inpatient medication profile for medication reconciliation.	O	
F-376	The system has the capability to review inpatient medication profile for medication reconciliation.	O	
F-377	The system has the capability to support inventory control through the Retail Pharmacy.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-378	The system has the capability to support electronic signature through the Retail Pharmacy.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
F-379	The system has the ability to maintain an enterprise wide formulary and process to distribute the formulary across the enterprise.	O	
F-380	The system has the ability to determine cost per administration of drug when the purchase of the drug is not in the same increment.	O	
F-381	The system has the ability to receive patient medication information from an external source	N	

F-382	The system has the capability to alert for needed liver enzymes when patient total dosage reaches certain level.	O	Lifetime dose range checking can could be built for a drug. The alert comment is built by your organization to provide instruction on next steps, such as “measure levels”.
F-383	The system has the capability to document for each item the date, time, person, references and next review date.	N	
F-384	The system has the capability to have the ability to review scanned prescriptions.	O	This is supported with the Etreby Retail solution, which is currently in the process of being contracted for by the County.
Medication Administration Requirements			
F-385	The system has the capability to perform and manage Medication Reconciliation including medication prescription, ordering, administration, and reconciliation with the use of bar code-enabled medication dispense.	O	
F-386	The system has the capability to perform medication reconciliation by listing active and inactive prescriptions.	O	
F-387	The system has the ability to indicate order still pending/not completed when transfer or moved or not completed in specific time frame (e.g, antibiotic ordered, pending pharmacy delivery and patient moves from ED to ICU before delivered)	O	
Laboratory Requirements			
F-388	The system has the capability to have technical modules that chart clinical and laboratory data.	O	
F-389	The system has the ability to handle the results of profiled items (e.g. WBC,RBC,Hgb, Hct.), and recognize them as a grouped item but also an individual component.	O	
F-390	The system has the capability to address the unique results of microorganisms and related antibiograms.	O	
F-391	The system has the capability to handle reflexive testing. An example of reflexive testing is when a confirmatory test is automatically ordered after a screening test is positive.	O	
F-392	The system has the capability to handle/enable the user to result a WBC cell differential.	O	
F-393	The system has the ability to archive patient's results and retrieve them when they return to the facility.	O	
F-394	The system has the ability to handle point of care testing and entry and display of results on the patient's MAR (e.g., sliding scale insulin).	O	

F-395	The system has the capability to handle planned orders (future orders) including how to prevent redundant testing by different ordering clinics.	O	
F-396	The system has the capability to generate specimen labels and customize the label.	O	
F-397	The system has the capability to purge or archive lab orders.	N	Cerner does not purge or archive patient records and results.
F-398	The system has the a method for positive identification for patients prior to phlebotomy and point of care testing.	O	
F-399	The system has the ability to document the specimen collection information.	O	
F-400	The system has the ability to integrate specimen tracking for offsite clinics and health centers.	O	
F-401	The system has the capability for the clinician to document review of results.	O	
F-402	The system supports a process for handling critical lab values.	O	
F-403	The system has capability of building manual and automated tests, reports, QA, setting up critical values, delta checks.	O	
F-404	The system has the ability to define delta checks, differential checks and others parameters to meet a specific defined population.	O	
F-405	The system has the ability to have a bidirectional interface with instruments.	O	
F-406	The system has the ability to create rules for specific tests and alert routing to the testing personnel of additional testing or confirmation of abnormal results.	O	
F-407	The system has the ability to build reports that can be customized and queried.	O	
F-408	The system has the ability to export reports in ascidia comma delimited, txt or HL7.	O	
F-409	The system has the ability to authorize non-lab personnel access to specified lab reports.	O	
F-410	The system has the ability to capture the user entry of Source, fixatives, # of tissues submitted.	O	
F-411	The system has the ability to document date/time of collection.	O	
F-412	The system has the ability to generate specimen labels, multiple labels if needed. Information includes patient demographics, type of specimen, date/time collected, order comments in a readable format (no codes).	O	
F-413	The system has the capability to capture and barcode patient demographics, specimen #, collect date/time.	O	
F-414	The system has the capability to capture specimens received using a barcode scanner.	O	

F-415	The system has the ability to print cassette and slides with MRUN# and Spec#	O	
F-416	The system has the ability to add and document additional testing, i.e., histological special stains, immunohistochemical staining with markers.	O	
F-417	The system has the ability to format reports.	O	
F-418	The system have the ability to allow/restrict non-Pathologist to view results based on order/specimen status (e.g., prelim, final).	O	
F-419	The system has the ability to document notification to clinician of abnormal results.	O	
F-420	The system has the ability to select or allow privileges based on position (e.g., Resident, Attending, Dept Head, etc.).	O	
F-421	The system has the ability to create an addendum to a report.	O	
F-422	The system has the ability to electronically sign single and/or multiple signatures for a single report.	O	
F-423	The system has the ability for Pathologist to view all reports pending signature for their own reports.	O	
F-424	The system has ability for Pathologist to assign other Pathologists to sign in place of them.	O	
F-425	The system has the ability to create management and technical reports for QA/QI, workflow, etc.	O	
F-426	The system has capability to enable an user to pull resulted anatomical reports based on Attending, Resident or Diagnosis.	O	
F-427	The system has the ability to track turnaround times for a defined group of physicians.	O	
F-428	The system has the capability to Generate back-reports or view on any patient with a current AP order.	O	
F-429	The system has the capability for a user to associate laboratory orders with a charge code.	O	
F-430	The system has the ability to create accounts for Outside Consultation.	O	
F-431	The system has the ability to store cellular images attached to the case and viewable to Clinicians.	O	
F-432	The system has the capability to have test results linked or cross-referenced to associated clinical reports for correlation studies (i.e., Anatomical Pathology reports and Cytotogy results).	O	
F-433	The system has the capability to utilize standard coding for anatomical pathology.	O	

F-434	The system has the ability to integrate body part diagrams into Anatomical Pathology Reports.	O	
F-435	The system has the ability to report to external agencies (e.g., cancer registry).	O	
F-436	The system has a process of linking local organism codes to the SNOMED and LOINC codes.	O	
F-437	The system has capability for read back and verify of critical labs.	O	
F-438	The system has the ability to order panels of labs (e.g., sepsis panel, trauma panel).	O	
Radiology Requirements			
F-439	The system has the capability to automate and manage processes for the radiology processes, including scheduling, radiology orders, film management, exam management, transcription and result processes.	O	
F-440	The system has the capability to address Radiology Reference Data including the following modules: CAT SCAN; Ultrasound; Nuclear Medicine; General Radiology; Mammography; Cardiology; MRI.	O	
F-441	The system has the capability to support cancel notices; Transcription; delineation of “reason for exam”; Patient packets to include: consent labels; flash cards; film folder labels; transport notice; requisition.	O	
F-442	The system has the capability to support Online Technical Comments which include the ability for the technologist to document technical factors.	O	
F-443	The system has the capability to support Medication Adverse Reaction Tracking including reactions to medications that may happen during radiology exam or contract media and can be documented as well through the common allergy application.	O	
F-444	The system has the capability to support medications documented in Radiology Management display on the MAR or be available for interaction checking.	O	
F-445	The system has the capability to provide the following reports: • Actual TAT Log • Detail Level Activity Report • Exam Activity Report • Order Activity Report • Medication Documentation • Repeat Analysis Report • Transcriptionist Activity Report	O	

F-446	The system has the capability to support Folder/Film Management Tracking to simplify tracking films as they are being checked in and out of the radiology service.	O	
F-447	The system has the capability of tracking release of digital image files to patients or provided to an outside facility.	O	
F-448	The system has inquiry functions for detecting missing folders and delinquent loans, in addition to tracking films that are sent to the radiology service from outside sources (foreign films).	O	
F-449	The system has the capabilities for documenting Radiologists' interpretations of images either through dication or in writing.	O	
F-450	The system has the capability to support role-specific applications for radiologists and other interpreting physicians to access exam, report, and other clinical information, create reports using templates and to electronically sign reports within Radiology.	O	
F-451	The system has the capability to support mammography management as an integrated product option that provides the ability to track and manage mammography procedures to ensure patient follow up and provide statistical outcome reporting.	O	
F-452	The system has the ability to support the tracking of the following: 1) Tracking of Mammography Screening and Diagnostic exams with attachment of ACR BI-RADS coding; please include how the system meets the MWSA (Mammography Quality Standards Act) 2) Patient Letters for Mammography exams 3) Patient Notifications; Patient Reminders 4) Patient Warnings; Physician Survey 5) Physician Reminder; Physician Warning	O	
F-453	The system has the ability to generate the following reports: 1) Patient History Form with Breast Diagram 2) Standard Management Reports 3) Summary Report by Radiologist 4) Outcome Summary Report 5) Assessment and Recommendation by Patient Age Group 6) Follow-Up Report 7) Assignment of Statistical Category based on Pathology Information 8) Reports by Radiology sub-section	O	
F-454	The system has the ability to support Radiology departmental scheduling as an Integrated option providing the ability to schedule appointments for procedures performed for the Radiology Service.	O	

F-455	The system has the ability to support Scheduling of Appointment types as either specific Appointment Types equivalent to orders, or Generic Appointment Types.	O	
F-456	The system has the capability to limit scheduling to View Only, Add and Modify, and/or Database Maintenance.	O	
F-457	The system has the capability to restrict scheduling based upon location of the patient or provider.	O	
F-458	The system has the capability to view PACS images with the Rad report. System will handle orders with multiple image types if the PACS system can only process each image separately.	O	
F-459	The system has the capability to display Radiologist work at sign on.	O	
F-460	The system has the capability to choose their workflow/tasks.	O	
F-461	The system has the capability for user-defined worklist.	O	
F-462	The system has the capability to have messaging capability akin to "post-it notes".	O	
F-463	The system has the capability for standardization of "Normals" across all procedures including Mammography.	O	
F-464	The system has the capability for managing, tracking and archiving films.	O	
F-465	The system has the capability to support Breast Imaging Reporting and Data System Atlas (BIRADS).	O	
F-466	The system has the capability to support BIRADS categories 0-6.	O	
F-467	The system has the capability to reconcile radiology exam (RIS) and image information (PACS) mismatches.	O	
F-468	The system has the capability to be DICOM compliant for images.	O	
F-469	The system has the capability for alerting the Radiology Technician of drug allergies, e.g., contrast media allergies.	O	
F-470	The system has the ability to maintain Radiation exposure per patient records and alerts to users when ordering additional tests when exposure levels are exceeded.	F	Radiation Dose monitoring is future functionality that is currently on the road map for 2012. However, radiation dosages can be captured in the Technical Comments currently.
F-471	The system has a process for identifying various stages of radiology reads including the ED preliminary read, radiology preliminary read, and final read including methods of addressing discrepancy in any of these reads.	O	
F-472	The system has the ability to indicate patients in the queue and triage /prioritization method.	O	

Operating Room Requirements			
F-473	The system has the capability to address: 1) Surgical Procedures 2) Surgical Personnel 3) Surgical Inventory 4) Items and Equipment 5) Preference Cards 6) Pick Lists 7) Preference Card Comments 8) Surgical Charging 9) Bill Item/Price and Bill Code Association 10) Anesthesiology required documentation	O	
F-474	The system has the capability to support case logging including: 1) Documentation of standard case information 2) Scheduled case information defaults into documentation 3) Case Times 4) Case Attendees 5) Surgical Procedures 6) Delays 7) Counts 8) Prosthetic Devices 9) Additional user defined forms and fields 10) Preference Cards including Generic procedure-based preference cards 11) Surgeon-specific preference cards 12) Comprehensive preference cards including Pick Lists 13) Documentation segments and default values	O	
F-475	The system has capability to support: 1) Search Preference Card database based on any of the following criteria 2) Procedure 3) Surgeon 4) Specialty 5) Date created, modified, last used in case 6) Personnel - created by, modified by	O	
F-476	The system has the ability to copy multiple preference cards simultaneously using Copy Wizard functionality. This should include the capability to upload existing Preference Card pick lists and comments.	O	

F-477	The system has the ability to support Case Cart/Pick List Management that allows Pick lists automatically generated for scheduled case(s)/procedure(s) via batch operations.	O	
F-478	The system has the ability to provide reports for the following criteria: 1) Scheduled case analysis 2) Scheduled procedure analysis 3) Cancelled case analysis 4) Completed case analysis 5) Procedure volume analysis 6) Procedure Coding Analysis 7) Implant log analysis 8) Delay reason analysis 9) Case cost analysis 10) Summary case cost analysis 11) Attendee case analysis 12) Attendee procedure analysis 13) Ability to save search criteria and report format through creation of "saved views" 14) Ability to create ad-hoc reports 15) Ability to share reports ("saved views") across users 16) Stoplight rules for highlighting exceptions 17) Export report data to Microsoft Excel	O	
F-479	The system has the ability to support the use of standard utilization reports including: 1) Block Utilization 2) Surgeon Utilization 3) Specialty Utilization 4) Cases with no preference card report 5) Cases with no surgeon-specific preference card report 6) Critical item report 7) Non-stock item report 8) Cases with no charges report	O	
F-480	The system has the ability to support Intraoperative Nursing Documentation including Forms-based nursing documentation of postoperative case information.	O	
F-481	The system has the ability to support Intraoperative Nursing Documentation including scheduled case information defaults into nursing documentation and allow for documentation by exception.	O	

F-482	The system has the ability to support Intraoperative Nursing Documentation including pre-defined values default from preference cards and allow for documentation by exception.	O	
F-483	The system has the ability to support Intraoperative Nursing Documentation including case pick list usage documentation by exception.	O	
F-484	The system has the ability to support Scheduling Appointment Book including: 1) Centralized or decentralized scheduling 2) Block scheduling utilizing flex rule and block expiration logic 3) Appointment shuffling 4) System-calculated total case duration for multiple procedure cases 5) Procedure durations based on surgeon/procedure recent or historical averages 6) Automatic printing of appointment notifications 7) Public and private scheduling comments 8) Scheduling action comments 9) Protocol Scheduling: up to x protocols per facility 10) Personnel conflict checking of up to x personnel resources 11) Equipment / instrumentation conflict checking across multiple surgical areas (from preference card pick list) 12) Surgeon Privilege Checking 13) Scheduling Guidelines (pop-up dialog windows) 14) Total number of Blocks 15) Total number of Appointment Types	O	
F-485	The system has the ability to support preoperative nursing documentation including: 1) Pre-Admission Testing 2) Forms-based nursing documentation of preoperative case information 3) Scheduled case information defaults into nursing documentation and allow for documentation by exception 4) Pre-defined values default from preference cards and allow for documentation by exception 5) Case pick list usage documentation by exception	O	

F-486	The system has the ability to support postoperative nursing documentation including: 1) Forms-based nursing documentation of postoperative case information 2) Scheduled case information defaults into nursing documentation and allow for documentation by exception 3) Pre-defined values default from preference cards and allow for documentation by exception 4) Case pick list usage documentation by exception	O	
F-487	The system has the ability to support bedside medical device interfaces which includes each identified bed being interfaced to a bedside data storage device.	O	
F-488	The system has the ability to support physician InBox functionality including: 1) Notification 2) Signing transcription 3) Forwarding results 4) Cosigning orders	O	
F-489	The system has the ability to support the notification of forwarded items including items that can be proxied individually to selected user(s). Group proxy functionality is also available for Forwarded Items.	O	
F-490	The system has the ability to support Result Notifications to the ordering provider. Areas will include results to endorse within the inbox and notifications of orders that have been placed by non-providers/physicians and that need to be cosigned or approved.	O	
F-491	The system has the capability for scheduling all operative rooms and resources.	O	
F-492	The system has the capability to integrate with hemodynamic monitors.	O	
F-493	The system has the capability to view prenatal record.	O	
F-494	The system has the capability to have intrapartum and postpartum to interface.	O	
F-495	The system has the capability to support all aspects of pre-operative care that is integrated with the electronic patient chart.	O	
F-496	The system has the capability for multi-booking recurring patients.	O	
F-497	The system has the ability to interface data from an external Anesthesiology system (e.g., includes Anesthesia start/stop times, ASA scores.	O	In order for Cerner Millennium to receive data from anesthesia devices, our anesthesia solution must be implemented to post this data.

F-498	The system has the ability to provide user security for surgeons, Anesthesiologist, CRNA, etc. to authorize and/or restrict those awaiting approvals from Med Admin or other credentialing agencies. This should include the ability to gather reports based on sub-divisions of surgery.	O	
F-499	The system has the ability to document surgery information that has 2 or more surgeries being performed simultaneously on the same patient.	O	
F-500	The system has the ability to export OR data to a file for upload to an external site (assumes you are given the receiving systems format).	O	
Intensive Care Unit Requirements			
F-501	The system has the ability to trend vital signs with administration of vasoactive agents.	O	
F-502	The system has the ability to bypass admitting screens to enter emergency treatment upon arrival.	O	
F-503	The system has the ability to link/auto-populate Point of care Testing (POCT) to various relevant sections of the E.H.R.	O	
F-504	The system has the ability for the ICU component to acquire data from physiologic monitors.	O	
F-505	The system has the ability for the ICU component to acquire data from bedside monitors.	O	
F-506	The system has the ability to perform standard physiologic calculations.	O	
F-507	The system has the ability to calculate acuity scores.	O	
F-508	The system has the ability for the ICU component to integrate and present fluid balance.	O	
F-509	The system has the ability to generate user alerts if procedures do not comply with standard protocol.	O	
F-510	The system has the ability to present laboratory data from a variety of sources.	O	
F-511	The system has the ability to support graphing and trending of patient information such as vital signs.	O	
F-512	The system has the capability to interface with beside point of care equipment.	O	
F-513	The system has the capability to interface bedside patient identification technology	O	
F-514	The system has the capability to generate labels for laboratory specimens.	O	
Rehabilitation Requirements			
F-515	The system has the capability to provide all necessary documentation for Rehabilitative Medicine for a large Rehab facility including the calculation and process to determine FIM's score.	O	

F-516	The system has the ability to document rehab services evaluations and obtain approvals for treatment, including support for the underlying routing process.	O	
Enterprise Master Patient Index (EMPI) Requirements			
F-517	The system has the ability to support EMPI maintenance of the integrity of a single person record by co-coordinating and reconciling incoming demographic data created in any proposed vendor system.	O	
F-518	The system has the capability to provide unique identification of persons across an enterprise, regardless of the number and type of registration systems publishing to the EMPI.	O	
F-519	The system has the ability to support advanced search algorithms providing the ability to perform inexact matching of the data provided from the proposed vendor's system common person search through all applications and modules.	O	
F-520	The system has the capability to perform inexact matching of the data for a common person search, passively through the inbound ADT interface match and reconcile processes.	O	
F-521	The system has the capability to include person combine tools to allow users to quickly, accurately, and efficiently define and merge person records.	O	
F-522	The system has the ability to support Content Code Sets including Admission Sources, Admit Mode, Admission Types, Race Codes, Accident Codes, Discharge Dispositions, Hospital Services, Language, Marital Status, Religion, Provider Specialty.	O	
F-523	The system has the ability to support registration flows for: Add/Modify/View Person; Modify/View Encounter; View Person; View Encounter.	O	
F-524	The system has the capability to support Search Criteria Including: MRN, Last Name, first, SSN, DOB, Medicaid number, Medicare number, and CIN.	O	
F-525	The system has the capability to support Probabilistic Match Weights to determine duplicate potential duplicate records during registration and Medical records merging.	O	
F-526	The system has the capability to support EMPI reporting for the following: 1) EMPI Person Combine Report 2) EMPI Person Combine or Duplicate Report 3) EMPI Person Combine Overlap Report 4) EMPI Possible Person Matches 5) EMPI Possible Person Matches-Duplicate Report 6) EMPI ESI Overlay Report; EMPI PM Overlay Report	O	
F-527	The system has the capability to support integrated Medical Necessity Checking using (Advance Beneficiary Notification).	O	

F-528	The system has the capability to support an integrated Enterprise Eligibility Management verification process that provides the ability to perform a single eligibility verification status inquiry for a patient/subscriber/dependent that verifies if insurance will cover the medical service to be rendered prior to performance to ensure reimbursement to respective providers.	O	
F-529	The system has the ability to capture, retain, update the assignment of a Medical Home for each patient. (must have the ability to receive data from external sources like CHP, HWLA, etc and should have the ability to track changes with audits). The system also needs to integrate into clinical systems (ED, Scheduling, etc.).	C	Cerner supports the ability to capture nursing home information within Cerner's Care Management solution. Additionally, Cerner supports standard HL7 interfaces for ADT, scheduling,
F-530	The system has the functionality to assist users in the prevention of generating duplicate patient records for example through matching algorithms for names, address information and other demographic indicators.	O	
F-531	The system has the ability to connect similar such as Gonzalez and Gonzales as possible matches.	O	
F-532	The system has an unmerge process.	O	
Health Information Management (HIM) Requirements			
F-533	The system has an integrated HIM set of functionality committed to the elimination of redundant data entry and the minimization of manual activities.	O	
F-534	The system has the ability to support Patient Data Management, Patient Care Chart Requests/Deliver, Documentation Completion, Coding/Abstracting Management, Release of Information Management, and Chart Location Tracking.	O	
F-535	The system has the ability to support deficiency modules, inter-hospital chart requests, suspension process, and release of information.	O	
F-536	The system has the ability to support Encoding Management/HIM Chart Coding through third party modules like 3M and/or Quantim.	O	
F-537	The system has the ability to support Barcode Labels for chart tracking.	O	
F-538	The system has the ability to support integrated medical transcription management modules that include: 1) Medical transcription 2) Remote transcription 3) Document types that delineate care levels 4) Multiple signature lines 5) Medical dictionaries 6) Document tracking 7) Deficiency tracking	N	

F-539	The system has the capability to support the merging and un-merging of identified duplicate medical records. The EHR System will need to be able to track the changes as well as accommodate moving visit information (e.g., an account) from one medical record to another with associated audit trails.	O	
F-540	The system has the ability to electronically receive from an external source scheduled reports (e.g., lab) and assign them to the appropriate patient records/accounts.	O	
F-541	The system has the ability to electronically route a custom report from your system's document imaging system.	O	While Cerner offers both of these solutions, Document Imaging and Patient eSig have not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.
F-542	The system has the ability to write custom reports for forms query (e.g., list all the CLIP forms for patients seen in the last month).	O	While Cerner offers both of these solutions, Document Imaging and Patient eSig have not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.
F-543	The system has the capability to integrate scanned documents or scanning documents.	O	While Cerner offers both of these solutions, Document Imaging and Patient eSig have not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.

F-544	The system has the capability to code Assisted Software Program for outpatient.	O	For ambulatory settings, Cerner's Computer Assisted Coding system, Discern nCode for Ambulatory, can systematically review and translate physician notes, EMR, and other system data into E&M, ICD-9, CPT, and SNOMED-CT codes for outpatient professional fee billing purposes. Because more detailed information is needed regarding the number of encounter notes annually written, this solution is not proposed at this time.
F-545	The system has the capability to prevent duplication.	O	
F-546	The system has the capability to support Computer Assisted Coding.	F	For inpatient settings, Cerner's Health Information Management computer assisted coding is in development with an anticipated availability in 2012.
F-547	The system has the capability to support/manage work queue for routing records for review, etc.	O	
F-548	The system has the capability to view the complete final record.	O	
F-549	The system has the capability to route reports to designated supervisors and medical records.	O	
F-550	The system has the capability to generate electronic reports on delinquency status.	C	
F-551	The system has the following document imaging capabilities: 1. Forms tracking and assignment to folders 2. Specialized process for routing for deficiency tracking 3. Review an assignment 4. Routing for analysis 5. Annotations 6. Routing to MD's for signature 7. Bar coded forms assignment	O	While Cerner offers both of these solutions, Document Imaging and Patient eSig have not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.
Emergency Department Requirements			
F-552	The Emergency Triage and Tracking application has the capability to automate and manage the processes for the emergency department to enable efficient, comprehensive providing care in a timely fashion.	O	

F-553	The system has the capability to support Multiple views that display all of the beds in the department and one for each area within the department such as Pediatrics, Chest Pain, Fast Track.	O	
F-554	The system has the capability to track patient statuses for patients with an encounter type of emergency or fast track and display other data about the patient.	O	
F-555	The system has the capability to be configured to meet the needs of various disciplines in the ED such as Physician, Nurse, etc .	O	
F-556	The system has the ability to track lists, including, but not limited to: 1) EMS List 2) Nurse List 3) Physician List 4) Triage List that includes all patients requiring Triage assessment 5) Registration List 6) Checkout List including all patients with zero tracking code and placed in checkout location 7) Provider List 8) Bed Tracking List	O	
F-557	The system has the capability to support Tracking Events including: 1) Arrival 2) Bed Assignment 3) RN Exam 4) Dr. Exam 5) Triage 6) Registration 7) Discharge 8) Lab 9) X-ray 10) EKG which include overdue and critical alerts for each event	O	
F-558	The system has the capability to support acuity levels such as I-Resuscitation; II-Emergent; III-Urgent; IV-Less Urgent; V-Non-urgent.	O	

F-559	The system has the capability to support Specialty selections including: 1) Cardiology 2) Orthopedics 3) Pulmonary 4) Ophthalmology 5) Pediatrics 6) ENT 7) Dental 8) Major Trauma 9) Minor Trauma 10) Full Code 11) Neurology 12) Psychiatry 13) Internal Medicine 14) Musculoskeletal 15) Gastrointestinal	O	
F-560	The system has the capability to support Provider Check-in/Check-out through role assignment such as team assignment, and patient reassignment functionality.	O	
F-561	The system has the capability to support Provider Roles such as: 1) ED Physician 2) ED Nurse 3) ED Nurse Management 4) Nurse Supervisor 5) ED Tech 6) ED Unit Secretary 7) ED Registration 8) ED Admin Secretary 9) Radiology Transport 10) DBA	O	
F-562	The system has the capability to support Team Assignments.	O	

F-563	The system has the capability to support ED documentation forms such as: 1) ED Triage Adult 2) ED Triage Pediatrics 3) ED Assessment Adult 4) ED Assessment Pediatrics 5) ED Education and Teaching 6) ED Treatments and Procedures 7) ED Valuables/Belongings 8) ED Vital Signs	O	
F-564	The system has the capability to support Reports such as: 1) Average LOS Report 2) Disposition Log 3) Chart Log 4) Activity Log 5) Patients Events Time Report 6) Patient Returns Log 7) Admits per Shift Report 8) LOS per Shift Report 9) Patient Acuity Report 10) Patients for Selected Care Providers Report 11) Primary Care and Referring Physician Log	C	
F-565	The system has the capability to ED patient education materials including Discharge Instructions in multiple languages and the capability to save patient education selections to the Electronic Health Record.	O	
F-566	The system has the ability to comply with regulatory requirements specific to the ED such as EMTALA.	O	
F-567	The system has the ability to support pre-registration or an patient en-route.	O	
F-568	The system has the ability to postpone or bypass mandatory/sequential entries in order to treat and document based on patient condition.	O	
F-569	The system has the capability of visual cues to notify the provider of established goals or guidelines times exceeded.	O	
F-570	The system has the capability for inter-facility (county and non-county) and intra –enterprise transfers (between county facilities) documentation flows between connected facilities.	O	If all facilities are sharing one Cerner Millennium domain, interfaces are not required; however, if each facility is on its own system or domain, HL7 ADT messaging is required.

F-571	The system has the ability to support non-bed/hallway areas for patient care areas.	O	
F-572	The system has the ability to notify provider of need for call back, and a process of documenting.	O	
F-573	The system has the ability to document trauma/resuscitation and support of a trauma reg.	O	
F-574	The system has the ability to support disaster/mass casualties and disaster triage.	O	
Cardiology Department Requirements			
F-575	The system has the capability to support Cardiology, including: • Problem Lists • Procedure Lists • Order Entry • Charting • Cardiovascular PACS Integration	O	
F-576	The system supports grouping like problems into disease categories (e.g., cerebrovascular disease, congenital heart disease, heart failure, hypertensive heart disease, ischemic heart disease, etc.) and enable one-click search when adding a problem to the list.	O	
F-577	The system supports the ability to define service groups and associate a patient with multiple groups (e.g., adult congenital, general cardiology, heart failure, interventional clinic, or practice A, B, and C).	O	
F-578	The system supports the ability to define clinical trials and assign a patient to one or more clinical trials; this must integrate with patient alerts.	O	
Managed Care Requirements			
F-579	The EHR System has the ability to have a managed care solution as an integrated part of the proposed EHR System or whether a separate solution will be required to which the EHR will interface.	O	

F-580	The system has the ability to provide the following Managed Care functionality: 1. Plan contracts/benefits management 2. Membership, enrollment, and eligibility 3. Provider network administration 4. Provider credentialing 5. Contracting and reimbursement 6. Encounters, claims, and adjudication 7. Capitation 8. Correspondence processing 9. Premium billing 10. Reporting 11. General ledger 12. Claims payable 13. Coordination of benefits 14. Authorizations, denials, modifications, and pending referrals	O	
F-581	The system has the ability to provide managed care medical administration for: 1. Utilization management 2. Case management 3. Disease management	O	
Anesthesiology Requirements			
F-582	The EHR System has the capability to have an anesthesia solution as an integrated part of the proposed EHR System or whether a separate solution will be required to which the EHR will interface.	O	Our anesthesia solution is fully integrated with our surgery solution and the full Cerner Millennium patient record. Interfaces are not needed.
F-583	The system has the capability to allow for a review of the medical history, including anesthesia, drug and allergy history.	O	
F-584	The system has the capability to allow for documenting interview and examination of the patient related to anesthesiology.	O	
F-585	The system has the capability to allow for notation of anesthesia risk according to established standards of practice (e.g,. ASA classification of risk).	O	
F-586	The system has the capability to allow for identification of potential anesthesia problems, particularly those that may suggest potential complications or contraindications to the planned procedure.	O	

F-587	The system has the capability to allow for a development of the plan for the patient's anesthesia care, including the type of medications for induction, maintenance and post-operative care and discussion with the patient of the risks and benefits of the delivery of anesthesia.	O	
F-588	The system has the capability to allow for a review a sample of inpatient and outpatient medical records for patients who had surgery or a procedure requiring administration of anesthesia.	O	Anything stored in the Cerner Millennium patient record is available for viewing by those with appropriate access.
F-589	The system has the capability to provide an intraoperative anesthesia record for each patient who receives general, regional or monitored anesthesia. Information to track, at a minimum, includes: • Name and hospital identification number of the patient; • Name(s) of practitioner who administered anesthesia, and as applicable, the name and profession of the supervising anesthesiologist or operating practitioner; • Name, dosage, route and time of administration of drugs and anesthesia agents; Techniques(s) used and patient position(s), including the insertion/use of any intravascular or airway devices; • Name and amounts of IV fluids, including blood or blood products if applicable; • Timed-based documentation of vital signs as well as oxygenation and ventilation parameters; • Any complications, adverse reactions, or problems occurring during anesthesia, including time and description of symptoms, vital signs, treatments rendered, and patient's response to treatment.	O	
F-590	The system has the capability to allow for a post-anesthesia evaluation be completed and documented no later than 48 hours after surgery or a procedure requiring anesthesia services.	O	

Proposer Instructions

This Appendix of the RFP contains detailed technical requirements for the EHR System desired by the Los Angeles Department of Health Services (LA DHS). Proposers must respond to all the requirements using one of the code provided below.

Response Code	Definition
Yes	The requirement is met.
No	The requirement is **not** met.

Note:

1. An omitted response will be assumed to be the same as a response code of “No".
2. Only one (1) response per requirement will be accepted.

Requirement #	Requirement	Yes / No
Platform		
T-1	The system shall be based upon proven state-of-the-art technologies. This includes browser-based, server-side architectures, configurable, and a range of industry-standard database, operating system, and programming platforms.	Yes
T-2	The Web-enabled portions of the application shall meet state-of-the-art Internet standards for graphics and design and for speed, reliability, and security for dynamic content and user interaction.	Yes
T-3	The system shall provide the ability to maintain multiple operating environments for development, test, training and production.	Yes
Scalability & Flexibility		
T-4	The system, including programs, database, and ancillary hardware and related software systems shall be able to retain its performance levels when adding additional users, functions, and data.	Yes
T-5	The system shall be scalable and adaptable to meet future growth and expansion needs.	Yes
T-6	The solution functionality and associated business rules shall be configured and re-configured (through tools that do not require "code" modifications).	Yes
T-7	The screens shall be highly re-configurable, providing ability to reposition and rename field labels, remove or “turn-off” unused fields, maintain data, and allow addition of custom-defined fields.	Yes
T-8	The system shall provide the ability to create and/or modify edits and business rules which determine The acceptance/correctness of data.	Yes
T-9	The system shall provide the ability for on-line access by any site connected to the organization WAN.	Yes
T-10	The system shall provide the ability for remote access by authorized individuals (i.e. web based VPN access).	Yes
Database Management & Architecture		
T-11	The system shall use an open relational database management system (RDBMS) to store all organization data.	Yes
T-12	The database system shall provide Structured Query Language (SQL) capabilities for database queries.	Yes
T-13	The system shall allow the database information exchange using current commonly accepted industry formats (e.g. HL7, XML)	Yes
T-14	The system shall support common database connectivity protocols such as ODBC.	Yes
T-15	The system shall provide an automated test script to validate the data after modifications or upgrades. The tool will support the ability to customize the script and provide a final report to document the validation.	Yes
T-16	The system shall provide data import functionality to receive standard format data from external parties.	Yes
T-17	The system shall provide data export functionality that creates common export file format (e.g. comma delimited, tab delimited, space delimited, quotation delimited, etc.).	Yes
T-18	The system shall provide the database backup and recovery tools required to support organization database recovery plan and procedures (note: if a DRP is in place).	Yes

T-19	The database system shall provide the following features: - Simultaneous access to data by concurrent users - Row level Locking - Automatic Query Optiomization - Views - Multiprocessor query execution	Yes
T-20	The system shall support an online data dictionary and table relationships that describe and maintain information on each data element including: data element name and type, description of the data element, and the format of each data element.	Yes
T-21	The system shall utilize naming conventions and standards for data elements, entities and tables, programs, report names, etc.	Yes
T-22	The system shall utilize utilities for database performance monitoring and tuning that comply with industry standards, including but not limited to tools for table & file maintenance.	Yes
T-23	The system shall lock database records based on organization parameters (e.g., at row level, field level, or at the application level).	No
T-24	The system shall accommodate separate instances of databases.	Yes
T-25	The system shall support online modifications to database structures with minimal user downtime.	Yes
T-26	The system shall allow for data replication including, but not limited to, copying an instance of any database to other organization specified locations (e.g., SAN).	Yes
T-27	The system shall have the ability to roll back any system, database, or any other component(s) impacted within 15 minute increments up to 24hrs, any day in the month, any month in the year, and any year in 30 years.	No
T-28	The system shall provide the ability for the administrator to track user behavior as well as database utilization.	Yes
T-29	The system shall provide standard data extraction Application Program Interface (API) to allow import and export of data.	Yes
Data Conversion and Interface		
T-30	The proposer shall provide all services needed to transform, standardize, migrate and load external legacy electronic data in order to establish an initial database suitable for live organization operations.	Yes
T-31	The system shall provide the ability to extract required data from organization to produce file(s) that can be sent by FTP to external agencies, including a system automated process of generating, encrypting, and delivering data to external agencies.	Yes
T-32	The system shall provide the ability to load information from standard file(s).	Yes
T-33	The system shall provide the ability to perform real-time updates.	Yes
T-34	The system shall have the capability to queue outbound messages in case a receiving system is down temporarily.	Yes
T-35	The system shall monitor timeliness of messages and alert users if certain time limits have been exceeded.	Yes
T-36	The system shall have the ability to evaluate interface messages for accuracy and completeness, and reject messages that are not constructed properly as well as the capability to generate reports of failed messages.	Yes
T-37	The system shall have the capability to analyze, correct and resend messages that have been rejected.	Yes

System Security Requirements		
System Access		
T-38	The system shall provide ability to use a single user sign-on for all modules with security configured for each module.	Yes
T-39	The system shall have the ability for security module to be maintained by an in-house System Administrator	Yes
T-40	The system shall provide expiration dates for passwords.	Yes
T-41	The system shall automatically notify users and force them to change passwords on a pre-defined frequency.	Yes
T-42	The system shall provide an efficient, flexible way to control and administer multiple levels of user access.	Yes
T-43	The system shall have the ability to support web based client access or other internet based client access technologies, with appropriate security access controls.	Yes
T-44	System must support password complexity that meets the following requirements: - Must contain at least 1 upper and 1 lower case alpha, 1 numeric, and 1 special character each - Minimum password length – 8 characters - Minimum password age – 2 days - Maximum password age – 90 days - Password expire warning – 14 days - Different from the previous 6 passwords used - Must not be an English dictionary word - Disable accounts after 90 days of inactivity	Yes
T-45	System provides the following password change rules for user accounts: - Passwords can only be changed by the authorized County System Administrator or the associated user - Passwords can be changed by the associated user only once in a 2-day period - Passwords can be changed by the associated user only once in a 2-day period - Users are re-authenticated before changing passwords	No
T-46	The system shall provide lock-out capability after a pre-defined number of unsuccessful user sign-on attempts.	Yes
T-47	The password is not displayed as clear text (Password Masking)	Yes
T-48	System provides integrated security managed in a central accounts database	Yes
T-49	System allows viewing of list of Users logged on to System in real-time	Yes
T-50	System allows addition of user-defined messages to logon screen	Yes
T-51	System integrates with Microsoft Active Directory for authentication and has the capability of notifying the end user of near domain account password expiration date as well as the ability to reset the password through the system's user interface	Yes
T-52	System performs secure and seamless logon for all third party integrated systems.	Yes
T-53	System encrypts passwords before being stored or transmitted.	Yes
T-54	System has the ability to disallow more than one active session per sign-on identification.	Yes

T-55	System allows users to re-authenticate and remotely log out of an active user session before logging in at another location.	Yes
T-56	System requires password re-entry before user is allowed to perform functions predefined as “high security”.	No
T-57	System encrypts sensitive data transmitted between clients and servers using Secure Socket Layer (SSL) Certificates, Transport Layer Security (TLS), or by other means	Yes
T-58	System provides a web (HTTPS) interface and provides an SSL configuration mechanism.	Yes
T-59	System restricts users from directly accessing the database.	Yes
T-60	System allows secure password resets in case passwords are forgotten.	Yes
T-61	The system shall have the ability to assign application access rights across entire suite of applications at a single point of entry.	Yes
T-62	System provides reminder alerts to users to reset passwords.	Yes
T-63	The time for passwords to be changed is predefined as per user’s role and access level. The County standard for users is 90 days.	Yes
T-64	System provides administrative ability to block users’ access during pre-defined off-hours.	No
T-65	System provides the option for multi-factor authentication for users with higher security access.	Yes
User Profiles/Administration		
T-66	System provides the ability for users to define and store user profile information, including but not limited to, the user’s name, user ID, employee ID, professional designation, etc.	Yes
T-67	The system shall have the ability to link the user logon ID to his/her employee number or contractor social security number, as well as to the location or group of locations to which the user is assigned.	Yes
T-68	The system shall have the ability to identify the type of single enterprise authentication used for system access, e.g. MS Active Directory.	Yes
T-69	System provides the ability to define user roles and user groups and associate these with user accounts.	Yes
T-70	System allows authorized site-specific users to manage site-specific user groups and user accounts up to and including their level of authority.	Yes
T-71	Ability for an administrator to delegate authority, by user group, to reset password	Yes
T-72	Ability for an administrator to delegate authority, by user group, to restore system access of locked out user	Yes
T-73	System provides the ability to restrict access based on users’ accounts’ privileges	Yes
T-74	System provides the ability to specify roles and privileges based on login locations	Yes
T-75	System allows restriction of rights, privileges or access at the user and group level	Yes
T-76	System allows restricting the rights, privileges or access of processes to the minimum required for authorized tasks	Yes

T-77	System allows authorization of administrators to manage restrictions or privileges associated with Users, groups, and processes including: - Defining levels of access - Assigning levels of access - Modifying a level of access - Removing a level of access - Viewing access levels, privileges and memberships	Yes
T-78	The system shall have the ability to specify roles and control access by role to: - Database - Module - Field - Inquirey - Report - Approval - Transaction - Table - User Site (i.e. location) across all functional areas - Period	Yes
T-79	The system shall have the ability to display the last date and time the user logged onto the system at the time of logon.	Yes
T-80	The system shall have the ability to suspend user access based on a table-driven parameter (i.e., employment status).	Yes
T-81	The system shall have the ability to suspend user access based on a pre-set date or based on hospital policy requiring renewa of access approval on a variable basis for non-County employees.	Yes
T-82	The system shall have the ability to suspend user-access after an organization defined inactivity period (i.e., 90 days).	Yes
T-83	System allows revocation of the access privileges of a user without requiring deletion of the user: - User-based (i.e., access rights assigned to each user) - Role-based (i.e., Users are grouped and access rights assigned to these groups) - Context-based (i.e., role-based with additional access rights assigned or restricted based on the context of the transactions, such as time-of-day, workstation-location, emergency-mode, etc.)	Yes
T-84	The system shall have the ability to limit user functionality based on the following access rights: - Full - Read - Write - Delete - Modify - Delete	Yes
T-85	System shall allow assigning multiple roles to one user.	Yes
Input Validation		

T-86	System insures that input validation is applied whenever input is received through user or external data interfaces. The validation approach is to constrain, reject, and then sanitize input.	Yes
T-87	System does not rely on client-side validation. The System design assumes that user input is malicious.	Yes
T-88	Data is validated for type, length, format, and range. Data validation is consistent across the System.	Yes
T-89	System avoids un-trusted input of file name and file paths. - System does not accept file names or file paths from calling functions. - Security decisions are not made based on user-supplied file names and paths.	Yes
T-90	System does not use parent paths when data within the System is being accessed. Attempts to access resources using parent paths are blocked.	Yes
T-91	The web server always asserts a character set: a locale and a country code, such as en_US.	Yes
Authentication		
T-92	All system and user accounts are identified.	Yes
T-93	Web sites are partitioned into un-restricted and restricted areas using separate folders.	Yes
T-94	System uses least-privileged accounts.	Yes
T-95	System insures that minimum error information is returned in the event of authentication failure.	Yes
T-96	The system shall have the ability to support biometrics and biometrics plus passwords (e.g., fingerprint scan and fingerprint scan plus password).	Yes
T-97	System authenticates the user before any access is allowed to protected resources (e.g., Protected Health Information)	Yes
T-98	System authenticates standalone devices before access is allowed to protected resources.	Yes
T-99	If Structured Query Language (SQL) authentication is used (e.g., communication between the application server and the database server) credentials are secured in storage and over the wire via Secure Socket Layer (SSL) or IP Security (IPSec).	Yes
Authorization		
T-100	Measures are in place to prevent, detect and log unauthorized attempts to access the System.	Yes
T-101	Rights and privileges are assigned based on authorization roles.	Yes
T-102	Database restricts access to stored procedures to authorized accounts only.	Yes
T-103	Direct access to database tables is prohibited.	Yes
T-104	All account IDs that are used by the System are identified and the resources accessed by each account is known.	Yes
T-105	Roles are mapped to user and data interfaces. Role rights and privileges are identified and maintained in an access control list.	Yes
T-106	System resources are mapped to System roles and allowed operations for each role.	Yes
Configuration Management		
T-107	Administration interfaces require strong authentication and authorization.	Yes
T-108	Administrator privileges are separated based on roles (e.g., site content developer, system administrator).	Yes

T-109	Remote administration channels are secured (e.g., SSL, VPN)	Yes
T-110	Configuration stores are secured from unauthorized access and tampering.	Yes
T-111	Configuration credentials and authentication tokens are not held in plain text in configuration files. (e.g., ssh client config file with remote login ID and password.)	Yes
T-112	User accounts and service accounts used for configuration management have only the minimum privileges required for the task.	Yes
Integrity Controls		
T-113	Measures are in place to detect unauthorized changes to information.	Yes
T-114	Measures are in place to protect information from being accidentally overwritten.	Yes
T-115	System supports integrity mechanisms for transmission of both incoming and outgoing files, such as parity checks and cyclic redundancy checks (CRCs).	Yes
T-116	Measures are in place to prevent the upload of unauthorized files (e.g., executable files).	Yes
Sensitive Data (e.g., ePHI, Personally Identifiable Information)		
T-117	Sensitive data and secrets are not incorporated in code.	Yes
T-118	Secrets are stored securely using a one-way hash. Database keys, connections, passwords, or other secrets are not stored in plain text.	Yes
T-119	Sensitive data is not logged in clear text by the System.	Yes
T-120	Database/file encryption for protection of sensitive data fields while the data is at rest (i.e., stored data) is provided.	No
T-121	Protection mechanisms are in place for sensitive data that is sent over the network.	Yes
T-122	Sensitive data is not transmitted using insecure protocols, such as FTP, telnet, tftp etc., unless tunneled through an authenticated encrypted connection (e.g. VPN).	Yes
T-123	Sensitive data is not stored in persistent cookies.	Yes
T-124	Measures are in place to prevent, detect and log unauthorized attempts to access sensitive or confidential data.	Yes
T-125	System restricts transactions involving financial or sensitive data to authorized user sessions originating on the County Intranet WAN only. Access to such transactions from the Internet is blocked.	No
T-126	System restricts access to financial transactions and other sensitive data by authorized users outside the County Intranet to Read Only mode.	No
T-127	All user sessions involving financial transactions or sensitive data are encrypted using SSL/HTTPS.	No
T-128	System provides administrative ability to block users' access to individual patient records for privacy reasons	Yes
Session Management		
T-129	SSL is used to protect authentication cookies.	Yes
T-130	The system shall provide automatic logout of users when there has been no activity for a pre-defined period, maintaining transaction integrity.	Yes
T-131	Session lifetime is limited to a pre-specified and configurable duration.	Yes
T-132	Session state is protected from unauthorized access.	Yes

T-133	Session identifiers are not passed in query strings.	Yes
T-134	Temporary objects are removed from the system, database connections are closed, and memory is released.	Yes
Timeouts		
T-135	System provides an automatic timeout if the session is idle for a pre-specified and configurable duration.	Yes
T-136	System warns the user before the timeout and prompts the user to re-enter their password.	Yes
Encryption		
T-137	The system shall have the ability to support 128-bit SSL encryption, or higher, between the client browser and the application tier for any or all modules or sub-modules at organization discretion. Identify security standard (SSL/FIPS encryption).	Yes
T-138	Encryption capability for certain data transmissions that require security protection.	Yes
T-139	Platform-level cryptography is used with no custom implementations.	Yes
T-140	System provides secure information delivery over the Internet via encryption by using triple-DES (Data Encryption Standard) or the Advanced Encryption Standard (AES)	Yes
T-141	Encrypted data delivered over the Internet is transmitted via open protocols (e.g., SSL, XML encryption)	Yes
T-142	Cryptographic algorithm and key size for the System's data encryption requirements is AES 256 bit or stronger.	No
T-143	Encryption keys are secured.	Yes
T-144	Key management procedure to secure and manage the encryption keys is defined.	Yes
Parameter Manipulation		
T-145	All input parameters are validated (including form fields, query strings, cookies, and HTTP headers).	Yes
T-146	Cookies with sensitive data (e.g. authentication cookies) are encrypted.	Yes
T-147	Sensitive data is not passed in query strings or form fields.	Yes
T-148	Security decisions do not rely on HTTP header information.	Yes
Exception Management/ Error Handling		
T-149	System exception handling minimizes information disclosure in case of an exception.	Yes
T-150	System returns generic error messages to the client, to avoid disclosure of sensitive information.	Yes
T-151	System code does not rely on internal system generated error handling. The System provides error-handling processes.	Yes
T-152	System errors are logged to the error log.	Yes
T-153	Private and sensitive data (for example, passwords) are not logged.	Yes
Audit Trails and Logging		
T-154	Auditing and logging in the System includes, at a minimum, authenticated access, configuration changes, privileged access such as use of administrative rights, and change of rights and privileges. The parameters logged includes user or system account ID, date/time stamp, event source, IP address, error/event code and type.	Yes

T-155	The system shall have the ability to record or capture information about each authorized and/or unauthorized access attempt such as: User ID, workstation, date, time, transaction (menu, screen, file, object), and attempted type of access (read, modify, etc.).	Yes
T-156	System generates an audit record for all activity of a given user (i.e., a trail of all user activity within the System)	Yes
T-157	System generates an audit record for activity associated with a transaction, from creation to completion, including logging of data additions, changes, and deletions	Yes
T-158	System provides an audit trail and viewable history of all transactions including but not limited to, user's login ID, date, and time stamp.	Yes
T-159	System allows selection of transactions to be logged	Yes
T-160	System allows selection of data elements to be logged in audit records	Yes
T-161	System allows logging of all user IDs that has used a given function	Yes
T-162	System allows logging of all user IDs that has updated a given field	Yes
T-163	System logs the following information in each audit record: - Date and time of the event - Component of the System (e.g., software, hardware) where the event occurred - User device or peripheral device involved in transactions - Type or transaction - User Identity - Outcome (success or failure) of the event	Yes
T-164	The System tracks the before and after record of modified data elements	Yes
T-165	The System restrict system administrator from changing log activity	Yes
T-166	The System secures audit records in the following ways: - Allows read access to authorized Users only - Protects stored audit records from unauthorized deletion - Prevents modifications to the audit records	Yes
T-167	System monitors user audit logs via an automated process, and reports on irregular activity. Irregular activities are identified based on County departments' rules and regulations. The irregular activity reports are customizable.	Yes
T-168	System provides the ability to archive records, reports and historic information for predefined timeline based on rules and regulation.	Yes
T-169	System prevents deleted records from being purged until they have been archived.	No
T-170	System maintains an audit trail of errors and exceptions.	Yes
T-171	All changes to the System hosting environment are logged and tracked. Reports are available for significant and critical changes and sent for review by a responsible person.	Yes
Synchronization with Applications or Devices Used in Offline Mode		
T-172	Data collection devices (e.g. – handheld devices, etc.) synchronize with the System securely using authentication, authorization and encryption mechanisms.	Yes

Reporting		
T-173	The system shall provide summarized and detailed reports on user access, usage logs, etc.	Yes
T-174	System provides online reporting capability to authorized County system managers for necessary review and accountability.	Yes
T-175	System provides error and exception reports.	Yes
T-176	System provides usage reports.	Yes
T-177	System provides configuration, user accounts, roles and privileges reports.	Yes
T-178	System provides a listing of privileged account holders within the System hosting environment.	Yes
Reporting and Data Warehouse		
T-179	The system shall generate charts and graphs based on report data within the system.	Yes
T-180	The system shall generate reports directly to MS Office, Hypertext Markup Language (HTML) or PDF formats, Open Doc, Open XML, etc.	Yes
T-181	The system shall provide ad hoc and standard query capabilities (with and without input parameters).	Yes
T-182	The system shall provide ability to create and maintain a report distribution mechanism with predefined reports (e.g., monthly reports that are specific by role, organization, and location via portal or Web).	Yes
T-183	The system shall provide the ability to view previously generated reports by all users or by specific users.	Yes
T-184	The system shall provide capability to schedule reports to run automatically.	Yes
T-185	The system shall allow for reporting by exception.	Yes
T-186	The system shall allow print preview of all reports before printing and have print screen and selective page(s) print functionality	Yes
T-187	The system shall be capable of utilizing MS-Excel to download information from the application and upload information into the application.	Yes
T-188	The system shall allow for user-friendly end-user report creation without requiring technical staff or expertise to create and publish reports within the modules.	Yes
T-189	The proposer shall provide an Ad Hoc reporting tool.	Yes
T-190	The Ad Hoc reporting tool shall be able to access any delivered or added fields in the database.	Yes
End-user Interface		
T-191	The user interface shall integrate information from multiple components into a unified display by business area or work type.	Yes
T-192	The system shall provide:	Yes
T-193	The system shall have a customizable online documentation and training materials such as context-specific help, search capability, organization-specific business process documentation and process maps.	Yes
T-194	The Proposer shall allow for field level edit checks for transactions during data entry and provide immediate user feedback, including error messages and possible corrective actions	Yes

T-195	The system shall have the ability to design a preferred sequence to make data-entry columns and fields match the order of information in organization source documents.	Yes
T-196	The system shall allow for the option of auto-fill capability per transaction/field entry throughout all modules	Yes
T-197	The system shall have the ability to restrict free form entry (e.g., provide drop down calendar for date field)	Yes
T-198	The system shall have the ability to accept mass data entry from an external source	Yes
T-199	On-line, interactive help with support for hyperlink technology and industry standard formats (e.g., HTML file formats)	Yes
T-200	Intelligent spell checking of text fields	Yes
T-201	The system shall have the ability to minimize the necessity of the mouse when user performs data entry tasks	Yes
T-202	The system shall present data to users such that a minimum of navigational effort is required, including:	Yes
T-203	The data elements required to complete a job function, whether to inquire/read only or data entry must be readily available.	Yes
T-204	The user interface shall integrate information from multiple components into a unified display by business area or work type.	Yes
Content and Document Management		
T-204	Capture system-generated documents and store them in virtual property or licensee folders.	Yes
T-205	The system shall store electronic forms.	Yes
T-206	The system shall scan and store imaged documents and electronic files.	Yes
T-207	The system shall enable indexing and searching of documents by a variety of user-defined metadata attributes.	Yes
T-208	The system shall support for full text search	Yes
T-209	The system shall have built-in viewers/converters for a wide variety of file types.	Yes
T-210	The system shall enable attachment of documents to e-mails and e-mail distribution lists.	Yes
T-211	The system shall store location identification of paper documents (attributes shall minimally include folder, box, and physical location).	Yes
Redundancy & Business Continuity		
T-212	The Proposer shall provide a recovery environment to maintain business continuity	Yes
System Capacity & Performance		
T-213	The system shall be able to handle an average transaction load with an average CPU utilization of no more than 35%-40% of the CPU capacity. The peak CPU utilization shall never exceed 70% of CPU capacity at any given time.	Yes
T-214	The system shall have a response time where the average transaction on the server needs to occur on average less than 1 second. The response time for the most common requests to reach a user shall not exceed 3 seconds.	Yes
T-215	The solution shall maintain 99.9% availability — including planned maintenance.	No
T-216	The solution shall track system uptime and transaction response times in order to demonstrate operation within acceptable levels.	Yes
T-217	The solution shall complete 100% of simple, single-screen online inquiry transactions in under one second, during peak usage.	No

T-218	The solution shall complete an average of 99% of all online update transactions in under 5 seconds over any 60-minute period, during peak usage.	Yes
Hosting		
T-219	The Proposer shall provide the facility required to host the computing and network environment, including appropriate physical security, required third-party software, and 24x7 staff support and monitoring environmental conditions (e.g. HVAC, port, fire detection, suppression, moisture, humidity and temperature.	Yes
T-220	The Proposer shall provide and manage all required infrastructure and network equipment within the data center, such as servers, routers, switches, load balancers and consoles.	Yes
T-221	Allow access to the EMH solution over the Internet and provide secure and confidential storage of all information transmitted to and from the LA DHS.	Yes
T-222	The Proposer shall monitor the computing systems (24 x 7) and communications circuits to report and alert on compromised system health, security, availability and capacity.	Yes
T-223	The Proposer shall review security notifications and alerts relevant to the hosting platform (e.g., notifications of bugs, attacks, patches), and apply as appropriate to maintain the highest level of defense.	Yes
T-224	The Proposer shall provide adequate firewall protection in order to secure Personal Data and other Confidential Information users of the EHR from unauthorized access by third parties.	Yes
T-225	The Proposer shall test application enhancements, fixes, and upgrades and assure the integrity of the resulting data.	Yes
T-226	The Proposer shall provide and maintain a method for proper escalation of issues and log all incidents, problems and error corrections as agreed to with LA DHS.	Yes
T-227	The Proposer shall adhere to service levels defined with LA DHS germane to availability, response time based on severity level, credits and other key hosting metrics.	Yes
T-228	The Proposer shall meet performance requirements detailed in System Capacity & Performance (Requirements T-213 through T-218).	No
Systems Operations Support and Error Handling		
T-229	The EHR System shall provide complete audit features for all transactions in all modules of the software solution.	Yes
T-230	The EHR System shall be able to perform real-time data redundancy on independent storage devices	Yes
T-231	simultaneously and switch over to the mirror database(s).	No
T-232	The system shall take advantage of network HA and redundancies and switch over to mirror databases without impact on the user.	Yes
T-233	The system shall provide system failovers or database redundancies.	Yes

Exhibit A.27 (Acceptance Certificate)

to the

Electronic Health Records System and Services Agreement

EXHIBIT A.27

ACCEPTANCE CERTIFICATE

Contractor is submitting this Acceptance Certificate to the County Project Manager and the County Project Director for Approval in connection with the Key Deliverable described below. This Acceptance Certificate must be Approved by the County Project Manager and the County Project Director, as evidenced by the County Project Manager's and the County Project Director's signature below, before Contractor can invoice County for payment in connection with the Key Deliverable.

TO BE COMPLETED BY CONTRACTOR	
Key Deliverable Number:	Title of Key Deliverable:
Key Deliverable Description:	Contract/Statement of Work Reference:
Submitted By:	
Phone Number:	
Email:	
Submission Date:	

COUNTY APPROVAL	
County Project Manager Approval	County Project Director Approval
By: _____ Name: _____ Date: _____	By: _____ Name: _____ Date: _____

Exhibit B (EHR System Software Components)

to the

Electronic Health Records System and Services Agreement

EXHIBIT B

EHR SYSTEM SOFTWARE COMPONENTS

This Exhibit B (EHR System Software Components) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. LICENSED SOFTWARE

LICENSED SOFTWARE		
NO.	**PRODUCT NAME**	**CONTRACTOR PRODUCT NO.**
1.	Abstracted Data Incoming	IF-29130
2.	Abstracted/Coded Data Outgoing	IF-29325
3.	Accounts Payable Voucher Outgoing	IF-29540
4.	Acute Care Content Package (Clinical Content)	KS-26980
5.	ADE Advanced (Clinical Content)	KS-26955
6.	ADTs Demographics Outgoing	IF-29220
7.	ADTs/Demographics Incoming	IF-29010
8.	Advanced Care Documentation	CA-22346
9.	Advanced Shipment Notice Inbound (856)	IF-29524
10.	Ambulatory Content Package (Clinical Content)	KS-26982
11.	Anatomic Pathology	PA-20080
12.	Anesthesia Management	SU-20320A
13.	AORN Syntegrity Content [1] (Clinical Content)	SU-22020
14.	AORN Syntegrity Content Subscription [1] (Clinical Content)	SU-22020
15.	AP Tracking Summary MPage	PA-22242
16.	Appointment Notifications Incoming	IF-29035
17.	Appointment Notifications Outgoing	IF-29245
18.	Behavioral Health (Clinical Content)	KS-23000
19.	Benefits Management	CP-20752
20.	Billing Outgoing (Batch)	IF-29275
21.	Blood Bank Transfusion	PA-20090
22.	CareAware iAware for Critical Care	IW-20100
23.	CareAware iAware Platform	IW-20200
24.	CareAware iBus for Bedside Medical Devices	CI-200800
25.	CareAware iBus for Laboratory Devices	CI-200700
26.	CareAware iBus for POC Medication Administration	CI-201000
27.	CareAware Infusion Management	IW-20450
28.	CareAware Infusion Management Suite	IW-20455
29.	CareAware MultiMedia - DICOM	MM-22270

LICENSED SOFTWARE		
No.	**Product Name**	**Contractor Product No.**
30.	CareAware MultiMedia - Digital Objects	MM-22260
31.	CareCompass	CA-22700
32.	Cassette Labeler Interface (Uni-Dir) w/o NiceLabel	PA-22247
33.	Cerner Care Management	RC-20150
34.	Cerner Device Manager Driver Library (Clinical Content, Licensed for the support term)	CI-200999
35.	Cerner Enterprise Master Person Index [1, 2]	CP-20746
36.	Cerner Health Information Management	MR-20400
37.	Cerner Hub – Immunizations (ASP)	PY-27655
38.	Cerner Hub – Immunizations (ASP)	PY-27655-PKG
39.	Cerner Patient Portal (ASP)	PY-27512
40.	Cerner Patient Portal (ASP)	PY-27580-PKG
41.	Cerner Registration Management	CP-20735
42.	Cerner Revenue Cycle Ambulatory	PV-20245
43.	Cerner Scheduling Management	CP-20740
44.	Charge Preprocessor	PA-25090
45.	Chart Search (ASP)	CE-10200-PKG
46.	Chronic Condition Management (Clinical Content)	PV-22110
47.	Clinical Data Repository	PS-20570
48.	Clinical Documents Medical Document Management Incoming	IF-29083
49.	Clinical Documents Outgoing (Discrete Data Elements)	IF-29330
50.	Clinical Documents Outgoing (Displayable Text)	IF-29335
51.	Core Measures: AMI w/eQualityCheck (Clinical Content)	LH-22513
52.	Core Measures: Children's Asthma w/eQualityCheck (Clinical Content)	LH-22516
53.	Core Measures: ED Throughput w/eQualityCheck (Clinical Content)	LH-22517
54.	Core Measures: Heart Failure w/eQualityCheck (Clinical Content)	LH-22512
55.	Core Measures: Pneumonia w/eQualityCheck (Clinical Content)	LH-22515
56.	Core Measures: SCIP w/eQualityCheck (Clinical Content)	LH-22511
57.	Core Measures: Stroke w/eQualityCheck (Clinical Content)	LH-22514
58.	Core Measures: VTE w/eQualityCheck (Clinical Content)	LH-22510
59.	Departmental Clinical Supply Chain	PH-25201
60.	Departmental Clinical Supply Chain	SU-25201
61.	Departmental Document Imaging Archive - Lab	MM-22358
62.	Disk File	IF-29625
63.	Doctor Update Incoming	IF-29040
64.	Doctor Update Outgoing	IF-29250
65.	ED Coding License	ER-22430
66.	ED Physician Documentation Content Subscription (Clinical Content)	ER-22435
67.	EK for Rehab (Rehab Hospital) - Inpatient [1] (Clinical Content)	KS-26887

LICENSED SOFTWARE		
NO.	**PRODUCT NAME**	**CONTRACTOR PRODUCT NO.**
68.	EK for Rehab (Rehab Hospital) - Outpatient [1] (Clinical Content)	KS-26888
69.	Electronic Invoice Inbound (810)	IF-29526
70.	Emergency Department Care Management	ER-20280A
71.	Emergency Department Triage and Tracking	ER-20275
72.	Executable Knowledge Foundation (Clinical Content)	KS-26950
73.	Executable Knowledge Foundation Ambulatory (Clinical Content)	KS-26953
74.	FetaLink	WH-20110
75.	FetaLink	WH-20100
76.	FetaLink - CAMM	WH-20102
77.	FetaLink - MDBus	WH-20101
78.	General Laboratory	PA-20070
79.	General Ledger Outgoing	IF-29306
80.	Health Facts Reporting (Clinical Content)	KS-26746
81.	Healthcare Eligibility Inquiry (EEM 270/271)	IF-29405
82.	Healthe Hosting - 36 Months (ASP)	PY-RHO-HEALTHE_36
83.	HealthSentry Data Services (Clinical Content)	KS-26748
84.	HLA	PA-20085
85.	Image Management for Pathology	PA-22245
86.	INet Critical Care	IC-20380
87.	Infection Control [1, 2]	LH-20115
88.	Infection Control [1, 2]	LH-20115
89.	Infection Control Regulatory Reporting Content [1] (Clinical Content)	LH-20110
90.	Inpatient Pharmacy	PH-20160
91.	IQ Health Services (ASP)	PY-27512-SVC
92.	Item Master Synchronization Incoming	IF-29095
93.	Lab Imaging	PA-22244
94.	Laboratory Imaging	PA-22240
95.	Laboratory Specimen Collections	PA-22800
96.	LearningLIVE	PS-22900
97.	Lighthouse: Stage 1: Hosp MU Clinical w/eQualityCheck [1, 2] (Clinical Content)	LH-22201
98.	Mammography Management	RA-22265
99.	Medication Administration Record	PS-22732
100.	MediSource Foundation for Ambulatory [2] (Clinical Content)	KS-26965
101.	MediSource Patient Specific [2] (Clinical Content)	KS-22001
102.	Microbiology	PA-20075
103.	MPages Development Kit [1, 2]	PS-22700
104.	MPages Runtime License [1, 2]	PS-22760
105.	Notification and Acknowledgement (278N) Interface	IF-29409

LICENSED SOFTWARE		
No.	**Product Name**	**Contractor Product No.**
106.	Open Engine	OE-20850
107.	Orders Incoming (with statuses)	IF-29020
108.	Orders Outgoing (with statuses)	IF-29230
109.	Outreach Service	PA-22205
110.	P2Sentinel Enterprise 40 Cores	CTP-P2S-ENT-T
111.	PathNet Advanced Barcoding and Tracking with AP Timeli	PA-22249
112.	PathNet Anatomic Pathology Advanced Barcoding and Trac	PA-22241
113.	PC Encoder Interface	IF-29665
114.	PC Maternity - Amb Clinic OB/GYN Nurse or Medical Asst	WH-10201
115.	PC Maternity - Amb Clinic OB/GYN Primary Provider	WH-10200
116.	PC Maternity - Ambulatory	WH-10220A
117.	PC Maternity - Ambulatory Nurse/MA Content (Clinical Content)	WH-10203
118.	PC Maternity - Ambulatory Provider Content (Clinical Content)	WH-10202
119.	Perioperative Communication Handoff	PS-22756
120.	Perioperative Nursing Care Management	SU-22463
121.	PharmNet Label Tool - Base	CTP-CCL-PNCLT
122.	POC Specimen Collections	PH-22800
123.	Point of Care Medication Administration	PH-22780
124.	Point of Care Specimen Collections	PH-22790
125.	PowerChart Ambulatory	PV-20230
126.	PowerChart ECG	CV-22520
127.	PowerChart Maternity Acute	WH-10410
128.	PowerChart Maternity Acute	WH-10411
129.	PowerChart Maternity Acute Content (Clinical Content)	WH-10412
130.	PowerChart Oncology	ON-30300
131.	PowerChart Oncology	ON-30310
132.	PowerChart Oncology Content (Clinical Content)	ON-30115
133.	PowerInsight Explorer	PI-20611
134.	PowerNote	PS-22480
135.	PowerNote Content for Acute Care (Clinical Content)	KS-26825
136.	PowerNote Content for Ambulatory (Clinical Content)	KS-26960
137.	PowerOrders	PS-20576
138.	PowerPlan	CA-20344
139.	PowerTrials Oncology Subscription— (Clinical Content)	ON-32105
140.	PowerTrials Screener	PT-20722
141.	PowerTrials Subscription (Clinical Content)	PT-20725
142.	Purchase Order Acknowledgment Inbound (855)	IF-29522
143.	Purchase Order Outbound (850)	IF-29562
144.	Pyxis MEDSTATION Interface	IF-29970

LICENSED SOFTWARE		
No.	**Product Name**	**Contractor Product No.**
145.	Radiology Management	RA-20135
146.	Reference Lab Network - Non Partner Connection (ASP)	PA-21007
147.	Reference Lab Network - Non Partner Connection (ASP)	PA-21007-PKG
148.	Requisition Bidirectional	IF-29530
149.	Results Incoming (Discrete Data Elements)	IF-29050
150.	Results Incoming (Displayable Text)	IF-29055
151.	Results Outgoing (Discrete Data Elements)	IF-29260
152.	Results Outgoing (Displayable Text)	IF-29265
153.	Robotics Connectivity (Incoming)	PA-22237
154.	Robotics Connectivity (Outgoing)	PA-22235
155.	SAP Business Objects Runtime License for PowerInsight [1, 2]	PI-20701
156.	Slide Labeler Interface (Uni-Dir) w/o NiceLabel	PA-22252
157.	St. John Sepsis agent (ASP)	CE-10300-PKG
158.	Surgery Case Tracking	SU-22440
159.	Surgical Management	SU-20310A
160.	Synoptic Reporting CAP Cancer Checklists [1, 2] (Clinical Content)	PA-22248
161.	Synoptic Reporting for Pathology	PA-22246
162.	T2 724 Access - License Read-only	CTP-T2-724-RO/REP
163.	T2 724Access - License DTViewer Only	CTP-T2-724-DTV
164.	TCP/IP (Interface)	IF-29560
165.	Vaccinations Outgoing	IF-29557
166.	Visual Desktop Integration (VDI)	RA-22266

[1] Integral Third-Party Software
[2] With Independent Conditions

2. Third-Party Products

THIRD-PARTY PRODUCTS		
No.	**Product Name**	**Contract Product No.**
1.	1 concurrent station(enterprise)	EE#T024-001U
2.	10 concurrent stations(enterprise)	EE#T024-010U
3.	20 concurrent stations(enterprise)	EE#T024-020U
4.	5 concurrent stations(enterprise)	EE#T024-005U
5.	APPLICATIONXTENDER REPORTS MGMT PDF	456-100-392
6.	APPLICATIONXTENDER SERVER - 10 CC USER	456-100-466
7.	APPLICATIONXTENDER SERVER - 1000 CC USER	456-100-473
8.	APPLICATIONXTENDER WEB SERVICES	456-100-402
9.	APPLICATIONXTENER REPORTS MANAGEMENT SERVER	456-100-439
10.	AX to CAMM 1-25	456-100-645_1-25
11.	CAP SNOMED International (III) for Pathology [2] (Clinical Content,	PA-22214

THIRD-PARTY PRODUCTS		
No.	**Product Name**	**Contract Product No.**
	Licensed for the support term)	
12.	Cardiograph Device License	DATAMEDFTCARDIO
13.	Cerner CMT (Enterprisewide) (Clinical Content, Licensed for the support term)	KS-22091
14.	Cerner Direct HISP Acute [2] (ASP, Licensed for the support term)	PY-70125-PKG
15.	Cerner Direct HISP CommunityWorks [2] (ASP, Licensed for the support term)	PY-70125-CW
16.	Cerner Direct Inbox [2] (ASP, Licensed for the support term)	PY-70110
17.	Cerner Direct Inbox [2] (ASP, Licensed for the support term)	PY-70110-PKG
18.	Cerner ePrescribe [2] (ASP, Licensed for the support term)	PS-20080-ASP
19.	Cerner ePrescribe Package (ASP, Licensed for the support term)	PS-20080-PKG
20.	Cerner i2b2 Node (ASP, Licensed for the support term)	KS-26500
21.	Cerner i2b2 Node (ASP, Licensed for the support term)	KS-26500-PKG
22.	Cerner Post Acute Referrals (Clinical Content, licensed for the support term)	RC-20152
23.	Clinical Exchange Network Connection [2] (ASP, Licensed for the support term)	PY-61551
24.	Clinical Exchange Network Connection [2] (ASP, Licensed for the support term)	PY-61551-PKG
25.	CMT Ambulatory [2] (Clinical Content, Licensed for the Support Term)	KS-26970
26.	CPDI - Imaging Software	CFG_CPDI_SW
27.	CPDI Test Software	CFG_CPDI_SW_TEST
28.	CPT Codes** - $13.50 per user per year (Clinical Content, Licensed for the support term)	KS-22092
29.	Datamed additional server license	DATAMEDSL
30.	DatamedFT Format Translator	CFG_DATAMEDSS
31.	DatamedFT v2 SW License with sw DatamedRcv modules	DATAMEDFT
32.	Digi Trax	CFG_DIGITRAX
33.	Discovere for Sites (ASP, Licensed for the support term)	DI-20115
34.	Discovere for Sites (ASP, Licensed for the support term)	DI-20115-PKG
35.	ED Coding Subscription (Clinical Content, Licensed for the support term)	ER-22436
36.	EK for Rehab (Rehab Hospital) – Inpatient [2] (Clinical Content, Licensed for the support term)	KS-26887
37.	EK for Rehab (Rehab Hospital) – Outpatient [2] (Clinical Content, Licensed for the support term)	KS-26888
38.	EMC AX to CAMM License 200+ Users	456-100-645_201+
39.	EMR Embedded View [2] (ASP, Licensed for the support term)	PY-61545
40.	EMR Embedded View [2] (ASP, Licensed for the support term)	PY-61545-PKG
41.	GG Director	GG-DIR
42.	GG Lic for 724Access Perpetual Tier 2 501-1500 budgeted beds	GG-T2-724

THIRD-PARTY PRODUCTS		
No.	**Product Name**	**Contract Product No.**
43.	GG Veridata for DR, Reporting and Live Standby	GG-VDATA
44.	Hema Trax.LPS ISBT-128 TCP/IP Print Server Site Copy O	HPS-100-PS1
45.	Hema Trax.LPS ISBT-128 TCP/IP Print Svr Site Copy Two	HPS-100-PS2
46.	IHE Gateway Document Registry and Repository [2] (ASP, Licensed for the support term)	PY-61536
47.	IHE Gateway Document Registry and Repository [2] party (ASP, Licensed for the support term)	PY-61536-PKG
48.	IHE Gateway for Ambulatory [2] (ASP, Licensed for the support term)	PY-61556
49.	IHE Gateway for Ambulatory [2] (ASP, Licensed for the support term)	PY-61556-PKG
50.	IHE Gateway Person Registry [2] (ASP, Licensed for the support term)	PY-61541
51.	IHE Gateway Person Registry [2] (ASP, Licensed for the support term)	PY-61541-PKG
52.	IHE Gateway Portal [2] (ASP, Licensed for the support term)	PY-61531
53.	IHE Gateway Portal [2] (ASP, Licensed for the support term)	PY-61531-PKG
54.	IHE Standard Connection [2] (ASP, Licensed for the support term)	PY-61511
55.	Image vol 10M/yr-Ent	EE#Y024-010M
56.	Image vol 20M/yr-Ent	EE#Y024-020M
57.	Image vol 5M/yr-Ent	EE#Y024-005M
58.	Image vol 600K/yr-Ent	EE#Y024-600K
59.	Kofax Capture Import Connector- Folder	AE#T003-0207
60.	Krames - HealthSheets – Inpatient (Clinical Content, Licensed for the support term)	KS-22201
61.	Krames - HealthSheets - Outpatient Clinic/Surgery Cent (Clinical Content, Licensed for the support term)	KS-22203
62.	Krames - HealthSheets - Physician Office (Clinical Content, Licensed for the support term)	KS-22202
63.	Krames ExitWriter ED (Clinical Content, Licensed for the support term)	ER-22190
64.	Lexmark Document Distributor Server License	43C0097-CRESG
65.	Medical Necessity Content for Acute Care [2] (Clinical Content, Licensed for the support term)	KS-22305
66.	Medical Necessity Content for Ambulatory [2] (Clinical Content, Licensed for the support term)	KS-22306
67.	Microsoft Windows 2008 Server - User Cal Lic & sftwr.	R18-00143
68.	Mortara ECG Viewer Site License	MORT-VIEW
69.	OPEN Microsoft Windows Server Standard License	P73-00352
70.	PC Anywhere Host and Remote	SLSW_PCANYWHERE
71.	ProVation Ambulatory Order Sets 1401-1500 budgeted beds	SWOSAMB1401-1500
72.	ProVation Authoring Application 1401-1500 budgeted beds	SWOSAPP1401-1500
73.	ProVation Discharge Order Sets 1401-1500 budgeted beds	SWOSDN1401-1500
74.	ProVation Emergency Eval Order Sets 1401-1500 budgeted beds	SWOSED1401-1500
75.	ProVation Inpatient Admin Order Sets 1401-1500 budgeted beds	SWOSINPT1401-1500

THIRD-PARTY PRODUCTS		
NO.	**PRODUCT NAME**	**CONTRACT PRODUCT NO.**
76.	ProVation Web Reviewer 1401-1500 budgeted beds	PVOSWEB1401-1500
77.	Sensage Clinical Enterprise 40 core - 3 collectors	SEN-CE-40
78.	Symantec pcAnywhere Host & Remote - (v. 12.5) – comp	14541094
79.	Symantec pcAnywhere Host & Remote - (v. 12.5) – comp	14541094
80.	VisitManager for the Enterprise (powered by IMH) (Clinical Content, Licensed for the support term)	AQ-60123
81.	Windows Server Std License	SLSW_WIN_STD_SRV
82.	Windows Server User CAL	SLSW_WIN_USERCAL
83.	Cerner eSignature Facility License	CTESIG-FAC

[2] With Independent Conditions

Exhibit C (Fees; Contractor Professional Services Rates)

to the

Electronic Health Records System and Services Agreement

EXHIBIT C

FEES; CONTRACTOR PROFESSIONAL SERVICES RATES

This Exhibit C (Fees; Contractor Professional Services Rates) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. INTRODUCTION

The fundamental premise of the fee and pricing structure under the Agreement is that all elements of the EHR System, including the Licensed Software, Third-Party Products, Integral Third-Party Software, Hosting Software, Hardware, and Services including, Implementation Services, Hosting Services, Support Services, and any Optional Work are paid for only in the amount, and solely through the contractually specified mechanisms for payment of the fees (the "**Authorized Billing and Payment Mechanisms**") set forth in this Exhibit C (Fees; Contractor Professional Services Rates), regardless of whether or not all costs or expenses to Contractor of providing a specific element of the EHR System can be directly traced to, or are captured by, an Authorized Billing and Payment Mechanism, each described in Section 2 (Authorized Billing And Payment Mechanisms). It is understood and agreed by the Parties that the total amount to be paid by County under the Agreement cannot exceed the Contract Sum unless the Contract Sum is modified pursuant to a duly Approved Amendment to the Agreement by the Board and Contractor's authorized representative(s) pursuant to Section 13 (Changes to Agreement) of the Agreement. The Contract Sum is the maximum amount that could be paid, but is not a commitment to spend sums allocated under the Contract Sum for Optional Work.

As set forth in Section 14.1 (Contract Sum) of the Agreement:

> The Contract Sum under this Agreement shall be the total monetary amount payable by County to Contractor for supplying all the tasks, subtasks, Deliverables, goods, and Services required or requested by County under and during the Term of this Agreement. If County does not Approve work in writing, no payment shall be due Contractor for those Services. The Contract Sum, including all applicable taxes, authorized by County hereunder shall not exceed Three Hundred Sixty-Six Million, Nine Hundred Ninety Thousand, Five Hundred Ninety-Four Dollars ($366,990,594) as further detailed in Exhibit C (Fees; Contractor Professional Services Rates), unless the Contract Sum is modified pursuant to a duly Approved Amendment to this Agreement by the Board and Contractor's authorized representative(s) pursuant to Section 13 (Changes to Agreement). The Contract Sum under this Agreement shall cover the authorized payments for all elements of the EHR System, including the Licensed Software, Third-Party Products, Hosting Software, Hardware, and Services including, Implementation Services, Hosting Services, Support Services, and any Optional Work. The Contract Sum shall not be adjusted for any costs or expenses whatsoever of Contractor.

The amounts to be paid by County under this Agreement through the Authorized Billing and Payment Mechanisms include all Contractor costs, including Contractor overhead, profit margin, and all costs of services, product, and goods delivery within the definition of Services. The Contract Sum is the total amount that is allocated by County for payment under this Agreement, but is not the amount to be paid

to Contractor under this Agreement. In the absence of an Approved Physical Growth Event, any sum attributed to a Use Reconciliation, the Approval by County of Optional Work, and Amendment approving additional EHR capabilities, and assuming no COLA adjustment is required; the maximum amount to be paid to Contractor over the Term under this Agreement is Two Hundred and Seventy-One Million, One Hundred and Seven Thousand, One Hundred and Eleven Dollars ($271,107,111).

Exhibit C.9 (Detailed Pricing Summary) provides the detailed pricing summary by component of the EHR System. Exhibit C.8 (Summary of Licensed Software Pricing by Module) provides a summary of pricing by Module of the EHR System.

2. AUTHORIZED BILLING AND PAYMENT MECHANISMS

There are only six (6) Authorized Billing and Payment Mechanisms for payment of the fees under this Agreement. Each of these is detailed in this Section 2 (Authorized Billing and Payment Mechanisms) of Exhibit C (Fees; Contractor Professional Services Rates) and listed as follows:

1. Milestone Payments

2. Recurring Monthly Fees

3. Approved Physical Growth Event

4. Optional Work

5. Amendment

6. Post-Contract Year 10 Cost of Living Adjustment

Contractor cannot invoice County under the Agreement except as provided under one of the Authorized Billing and Payment Mechanisms, and will not be entitled to, and will not receive, any payment, except as provided under one of the Authorized Billing and Payment Mechanisms set forth in this Section 2 (Authorized Billing And Payment Mechanisms).

2.1 MILESTONE PAYMENTS

This Exhibit C (Fees; Contractor Professional Services Rates) sets forth the Milestone payment structure Exhibit C.6 (Key Milestones and Key Deliverables Table) and amounts ("**Milestone Payments**") set forth in Exhibit C.2 (Milestone Payments Table). The Milestone Payments amount of Sixty-Eight Million, Three Hundred Eighty Nine Thousand, Three Hundred Forty-Seven Dollars ($68,389,347) through the Productive Use of the last Cluster is fixed and is not subject to change except in the event of an Approved Physical Growth Event or Approved Supplemental Travel each described below, and collectively referred to as "**Authorized Modifications to Milestone Payments**". The Milestone Payments were negotiated between Contractor and County as a material condition under this Agreement and for the period from the Effective Date through the payment of the last Milestone Payment are to capture all compensation to Contractor for the Licensed Software (includes Integral Third-Party Software), Third-Party Products, Implementation Services, Support Services prior to its transition to Recurring Monthly Fees, one-time costs as to AMS Services and AMS Services prior to its transition to Recurring Monthly Fees, one-time costs as to Hosting Services, and Hardware. Specified components of the Services (e.g.

Hosting Services), and Licensed Software, and Third Party Products (e.g., clinical content) included in the Milestone Payments will transition from being paid under the Milestone Payments to being paid as Recurring Monthly Fees upon Productive Use of the last Cluster (these items are highlighted on Exhibit C.3 (Pricing Spreadsheet) both individually and collectively as "**Milestone Payments Items That Transition"**).

The Milestone Payments are to be paid in accordance with the Agreement. Sections 14.3 (Implementation Services) and 15 (Invoices and Payments) most directly address the Milestone Payments, though relevant issues such as Acceptance, are addressed throughout the Agreement. Exhibit C.2 (Milestone Payments Table) identifies the Key Milestones; the Key Milestone Allocation; the Key Milestone Scheduled Duration; the Monthly Key Milestone Payment; the Holdback Amount as to each Monthly Key Milestone Payment; the Key Deliverables associated with each Key Milestone; and the Credit Due Date for each Key Deliverable. As to items marked on Exhibit C.2 (Milestone Payments Table) as Milestone Payments Items That Transition, if Productive Use of the last Cluster does not occur on or before November 30, 2015 and County has not provided notice to Contractor of a material breach of the entire Agreement, such items will transition from being paid under the Milestone Payments to being paid as Recurring Monthly Fees. Notwithstanding the payment dates and amounts in the supporting exhibits of this Exhibit C (Fees; Professional Service Rates), the payment dates and amounts are subject to the provisions of the Agreement and the timing may otherwise be adjusted to accommodate Approved modifications to Exhibit A.25.1 (Project Work Plan).

The Parties understand and agree that there is no concept of a financial change order applicable to the Agreement, except as expressly provided for with regard to Optional Work or Pool Dollars that are derived from one of the Authorized Billing and Payment Mechanisms. The limitations on the concept of a financial change order are intentional and are designed to ensure that the fixed fee elements of the Agreement remain unchanged and predictable throughout the Term.

As to Milestone Payments, in the absence of an Approved Physical Growth Event, there can be no change to the Milestone Payments except for Approved Supplemental Travel. For purposes of this Agreement, Approved Supplemental Travel is appropriate only in the event that (1) County Approves Super User training of some or all of the 300 Super Users that Contractor agreed to be provide at County locations; (2) if County elects to have an implementation event take place in California which is planned to occur under the SOWs in Kansas City, Mo., (3) travel to California required by the Contractor Delivery Consultant(s), Contractor Solution Architect(s) or other required resources in connection with the implementation of Infusion Management, or (4) Contractor provides non-standard and additional resources on site at County facilities to work with the County Work Groups to address systemic issues identified relating to completion of Decision Design Matrix or Data Collection Workbook (e.g., time management, complexity, facilities, tools, materials) and its Learning Services Consultant or other non-standard on site resources as determined necessary to support the Project through the governance process defined in Exhibit A.2 (Project Initiation Statement of Work).

Approved Supplemental Travel shall include reimbursement of airfare, parking, mileage, rental cars, taxi, fuel, tolls, lodging, and per diem Approved by County in advance of the expenditures and the reimbursement shall be subject to, and shall not exceed, the expenditure limits set forth for County personnel in the then current Chapter 5.40 (Travel and Other Expenses) of the Los Angeles County Code, and as updated from time to time by the Los Angeles County Auditor-Controller. Contractor will provide

all invoices, receipts, and other documentation reasonably needed to support the request for reimbursement.

2.2 RECURRING MONTHLY FEES

This Exhibit C (Fees; Contractor Professional Services Rates) sets forth the timing and amounts of the Recurring Monthly Fees. The total Recurring Monthly Fees amount of One Hundred Twenty Million, Five Hundred Seventy-One Thousand, Two Hundred Twenty-Six Dollars ($120,571,226) as reflected on Exhibit C.2 (Milestone Payments Table) under Total Recurring Monthly Fees through the Initial Support Term are fixed and are not subject to change except in the event of an Approved Physical Growth Event or a Use Reconciliation after Contract Year 5 and Contract Year 7. The Recurring Monthly Fees amount of Seventy-Nine Million, Six Hundred Forty-One Thousand, Six Hundred Five Dollars ($79,641,605) from the first Renewal Term through the Term are fixed and are not subject to change except in the event of (1) an Approved Physical Growth Event, (2) a Use Reconciliation after Contract Year 10, if applicable, or (3) a Contract Year 10 Cost of Living Adjustment. The Recurring Monthly Fees were negotiated between Contractor and County as a material condition under this Agreement to capture all compensation to Contractor for the Licensed Software (includes Integral Third-Party Software), Third-Party Products, Services (Includes Implementation Services, AMS Services, Support Services, Hosting Services), Hardware, Hosting Software, and Hosting Environment; subject only to the Authorized Billing and Payment Mechanisms and Use Reconciliation.

2.2.1 Use Reconciliation

After the completion of the fifth (5th), seventh (7th), and tenth (10th) Contract Years, and in a Contract Year following an Approved Physical Growth Event, Contractor may request in writing within sixty (60) days of the beginning of the applicable Contract Year, a Use Reconciliation to occur during the first calendar quarter of the applicable Contract Year. The results of the Use Reconciliation will be applied as of the first (1st) day of the Contract Year in which the Use Reconciliation takes place. Notwithstanding the forgoing, due to the potential higher volatility in the County's use of ePrescribe as compared to other Integral Third-Party Software or Third-Party Products, and because the cost of ePrescribe is passed through by Contractor to County without mark-up, County has agreed to a more frequent Use Reconciliation schedule for ePrescribe. County's use of ePrescribe will be evaluated annually after the first Use Reconciliation and throughout the Support Term (and Contractor may request one additional Use Reconciliation in a Contract Year if there is an increase in use by County of twenty percent (20%) or greater that occurs between one annual ePrescribe Use Reconciliation and the next).

The Use Reconciliation is intended to capture additional infrastructure costs to Contractor that arise in connection with expanded use or consumption by County of the EHR System. The Use Reconciliation will be accomplished by comparing the baseline use and consumption metrics as to the EHR System components specified in the table in Section 2.2.2 (Baseline Use Metrics) (the "**Baseline Use Metrics**") against County's actual use and consumption metrics measured in accordance with the table in Section 2.2.2 (Baseline Use Metrics). After the completion of any Use Reconciliation, in the event County's then-current use exceeds the baseline use metrics in an amount that triggers a "**Reconciliation Adjustment**" to the Recurring Monthly Fee as provided below, the then-current use metrics shall become the new baseline use metrics for any subsequent Use Reconciliation.

2.2.2 Baseline Use Metrics

Item subject to Use Reconciliation	Baseline Use Metric	Use Reconciliation Trigger	Additional Use Unit Increment(s)	Additional One-Time Fees	Additional Recurring Monthly Fee
Hosting Services based on Peak Average Concurrent Users	5,500 Peak Average Concurrent Users	Peak Average Concurrent Users in excess of 5,500 for three (3) consecutive months in one (1) Contract Year	Every 10 over 5,500 Peak Average Concurrent Users. Subject to the provisions of Section 2.2.4 (Ratio Protection) the method for calculating the payment adjustment based on a Peak Average Concurrent User increase is illustrated by the following example. Assuming the then current Use Baseline is 5,500 Peak Average Concurrent Users and actual Peak Average Concurrent Users as determined by Contractor's measurement tools, and as reported to County on a monthly basis, is 6,000, and there is no ratio protection issue, the monthly recurring Hosting Services Fee will be increased by ((500 Peak Average Concurrent Users /10) X $850.00) and there will be a one-time charge of (500/10) X $1700.00.	$1,700	$850
Image Aware Virtual Archive Image Storage added every Contract Year	4.8 Terabytes ("**TB**") as of the Effective Date, and 4.8 TB of Image Storage added upon the commencement of each Contract Year. This Use Baseline is cumulative. For example, if in Contract Year 1 County's Image Storage is 3 TB and Contract Year 2 it is 6 TB, the total is 9 TB which is below the 9.6TB cumulative total for the two Contract Years. As a result, exceeding the 4.8 TB increase in Contract Year 2 does not exceed	Image Storage exceeds the cumulative TBs available as of the commencement of the Contract Year in which a Use Reconciliation is to take place.	One Hundred (100) Gigabytes of Images Storage	$800	$400

	the then-applicable Use Baseline for additional storage until the aggregate storage amount for the two (2) Contract Years of 9.6 TB is exceeded.				
CPDI Ascent Capture Server	(7) Ascent Capture Servers (located at Client Site) (6 production and 1 test)	The addition of a CPDI Ascent Capture Server, whether production or test, over the Baseline Use Metric.	(1) Ascent Capture Server	$1,200	$600
CPDI Ascent Capture User Licenses	18.2% of the 5,500 Hosting Services Peak Average Concurrent Users	Concurrent Users in excess of 18.2% of the Hosting Services Peak Average Concurrent Users	10 Concurrent Users	$16,650	$670
CareAware iBus Servers	3,000 Device Connections There are 1,000 Device Connections per production server pair. For the 3,000 device connections, there are (9) CareAware iBus Servers, including (6) Production Servers and (3) Test Server.	Expansion beyond 3,000 device connections will require the addition of 2 CareAware iBus Servers to accommodate an incremental 1,000 device connections.	Two (2) Servers (per 1,000 additional device connections)	$3,200	$1,600
PowerInsight Web/Bus. Objects Servers	100 Peak Concurrent Users of PowerInsight Five (5) Web/Business Objects Servers (4 production and 1 test) (estimated to support up to 100 Peak Concurrent Users of PowerInsight).	Expansion beyond 100 Peak Concurrent Users of PowerInsight will require the addition of 1 Web/Business Objects Servers to accommodate an incremental 25 Peak Concurrent Users of PowerInsight	One (1) Web/Bus. Objects Server per 25 additional Peak Concurrent Users of PowerInsight	$1,600	$800
7x24 Client Site Downtime Viewer Servers	200 Client-owned, on-site workstations that receive updates from 7x24 DT Viewer servers For 200 Client-owned, on-site workstations there are (3) Servers, including (2) Prod Servers and (1) Test	Expansion beyond 200 client-owned on-site workstations that receive updates from 7x24 DT Viewer servers will require the addition of 1 Client Site Downtime Viewer Server to accommodate an incremental 100 workstations.	One (1) Server per 100 additional workstations that receive updates from 7x24 DT Viewer servers	$3,000	$1,500

	Server. Each production server supports up to 100 workstations.				
7x24 Read-Only Concurrent Users	2,250 Peak Concurrent Users of the 7x24 Read-Only System	Use in excess of 2,250 Peak Concurrent Users of the 7x24 Read-Only System	One hundred (100) additional Peak Concurrent Users of the 7x24 Read-Only System	$2,400	$1,200
ePrescribe	2,542 Average number uniquely identified Providers, eprescribing per month, as calculated over a calendar quarter (A health professional who uses ePrescribe to write prescriptions; physicians (M.D., D.O.), physicians' assistants; or other advanced practitioners.)	Use in excess of 2,542 Average number uniquely identified Providers, eprescribing per month, as calculated over a calendar quarter, provided the parties do not attribute such increase to a seasonal aberrancy.	One (1) additional uniquely identified Provider, eprescribing per month	Not Applicable	$11
Restricted Third-Party Pass-Through Bundle The following is a limited list of third-party software that will be subject to Use Reconciliation as an aggregated amount covering each of the Approved third-party items below. Notwithstanding the forgoing, these items will not be considered in a Use Reconciliation that occurs in a Contract Year following an Approved Physical Growth Event because third-party software is otherwise accounted for as Approved Physical Growth Event Expansion Pricing. • Cerner Post Acute Referrals • EK for Rehab – Inpatient • EK for Rehab) – Outpatient • Krames HealthSheets – Inpatient • Krames HealthSheets Physician Office • Krames HealthSheets Outpatient Clinic • Krames ExitWriter ED • ED Coding Subscription	Per the Hosting Services based on Peak Average Concurrent Users described above	Per the Hosting Services based on Peak Average Concurrent Users described above	Per the Hosting Services based on Peak Average Concurrent Users described above	Not Applicable	$187
Provided PS Sentinel is used with the EHR System	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

2.2.3 Concurrent User Definitions

The "**Peak Concurrent Users**" shall mean the highest number of County Users simultaneously logged on through any device to the Hosting Services measured on a daily basis throughout each month. A User connecting a mobile electronic device to the Hosting Services or accessing the Hosting Services via a mobile electronic device or other wireless device will be counted as part of the Peak Concurrent Users. A Concurrent User logon is triggered and counted as part of the Peak Concurrent Users only when a User logs on to the Hosting Services through a device. The only way for a single User to be counted as more than one (1) Concurrent User simultaneous logon is for that User to be logged on to more than one (1) device at the same time. The Peak Average Concurrent Users is calculated by averaging the Peak Concurrent Users for the ten (10) highest days during a given calendar month. "**Peak Concurrent Users of PowerInsight**" shall have same meaning as Peak Concurrent Users, except the measurement is taken separately of users of the PowerInsight application only, and references to "Hosting Services" in the definition shall be deemed to refer to "PowerInsight."

2.2.4 Ratio Protection

As described further below, County has provided Contractor with information reflecting the number of County Users by their role and level of employment (e.g. full time, part time, less than part time). Contractor has used these numbers and its experience providing electronic health records systems to other health care systems to derive the number of County Users against which to apply Contractor's established concurrent use ratios. Contractor ratios typically range from 5:1 to 4:1, with the 4:1 ratio yielding the highest concurrent user count using Contractor's ratios.

Contractor has applied a 4:1 ratio to County Users to derive the five thousand, five hundred (5,500) Peak Average Concurrent Users baseline used in the Agreement. The number of County Users, the roles of the County Users, and the percentage of time worked by the County Users (e.g., full time, part time greater than fifty percent (50%), part time less than fifty percent (50%)) was provided by the County and is summarized in the DHS EHR Users Summary table (Exhibit C.5 (DHS EHR Users Summary)). Contractor used the information in Exhibit C.5 (DHS EHR Users Summary) and determined that based on that information the appropriate number of County Users to utilize to calculate Concurrent Users is twenty-two thousand (22,000).

A. In the event there is a Use Reconciliation and the trigger level of Peak Average Concurrent Users required for a price adjustment is met (actual Peak Average Concurrent Users exceeds the then current Use Baseline for Peak Average Concurrent Users as specified in the table in Section 2.2.2 (Baseline Use Metrics)), and the excess Peak Average Concurrent Users is determined to be primarily caused by County's use of the EHR System at a lower than 4:1 (*e.g.*, 3:1) ratio (and not due to an increase in the number of nominal County Users as determined by the greater of twenty-two thousand (22,000) or the number of presumptive County Users), then no price adjustment will result. The ratio is the number of nominal County Users to the Peak Average Concurrent Users. The number of presumptive County Users is derived, as illustrated in the table below, utilizing the applicable numbers as of the Effective Date, from a sum of the then current numbers of users, weighted by the work effort multiplier associated with each work effort category (i.e., full time, half time, and less than half time.

Work Effort Category	Number of Personnel	Work Effort Multiplier	Presumptive County Users
Full Time Personnel with Access	21,758	0.9	19,582

Half Time Personnel with Access	2,188	0.45	985
Less than Half time Personnel with Access	5,185	0.18	933
Total presumptive County Users			21,500

B. In the event the cause of the excess Peak Average Concurrent Users is determined to be caused both by County's use of the EHR System at a lower than 4:1 (*e.g.*, 3:1) ratio and by an increase in the number of nominal County Users as determined by the greater of twenty-two thousand (22,000) or the number of presumptive County Users (calculated as provided in Section 2.2.4 A above), County will pay one-half (1/2) of any price adjustment triggered by such Peak Average Concurrent Users.

C. In the event the cause of the excess Peak Average Concurrent Users is determined to be caused only by an increase in number of nominal County Users as determined by the greater of twenty-two thousand (22,000) or the number of presumptive County Users (calculated as provided in Section 2.2.4 A above), any price adjustment will be in accordance with this Sections 2.2.1 (Use Reconciliation); 2.2.2 (Baseline Use Metrics); and 2.2.3(Concurrent User Definitions) of this Exhibit C (Fees; Contractor Professional Services Rates).

Notwithstanding the forgoing, if the Contractor ratio is insufficient and the insufficiency is directly attributable to a government mandated change in the use of EHR Systems (excluding changes mandated in connection with Meaningful Use at any stage or by the County); County shall be responsible for such increased Peak Average Concurrent Users attributed to the government mandated change as if the ratios were correct. Further, if Contractor demonstrates to County at the Concurrent Use Management meeting over two (2) or more consecutive months that there is a material number of Extended Timeouts, then County shall be responsible for increased Peak Average Concurrent Users attributed to the number of County Extended Timeouts sessions recorded by Contractor as if the ratios for those Extended Timeout sessions were correct. For purposes of this Section, an "**Extended Timeout**" shall mean a Concurrent User session that is ended automatically by a default setting of thirty-one (31) minutes or more.

2.2.4 Concurrent Use Management

To effectively manage the Peak Average Concurrent Use of the EHR System and minimize the likelihood of a Use Reconciliation payment resulting from Peak Average Concurrent User increases, the Parties agree to jointly manage concurrent use throughout the Term. In each calendar month Contractor shall measure the variance of the Baseline Use Metric and the Peak Concurrent Users on a daily basis. County will have access to daily reports on its Peak Concurrent Users via Contractor's Lights on Network dashboard tool. The parties shall manage concurrent use by utilizing a five thousand (5,000) Peak Concurrent User target. Whenever Peak Concurrent Users exceed five thousand (5,000) more than three (3) times in any calendar month, Contractor will notify County in writing and provide as much detail as to reasons for the Peak Concurrent User spikes as it can discern from its data and County's historical concurrent use patterns. If the Parties cannot identify the cause of the spikes, Contractor will perform a root cause analysis to assess the reason for the variance. Additionally, concurrent use management shall be a standing agenda item for the Quarterly Review Meetings.

2.3 APPROVED PHYSICAL GROWTH EVENT

Except as provided through application of another Authorized Billing and Payment Mechanism there is no additional fee or charge to County for increasing the volume of its use of the EHR System as authorized under the Agreement unless the County: (i) makes the EHR System available for use to another acute care, rehabilitation or mental health hospital that is not included in the Clusters or for which County owns, operates, manages, or subsidizes the operation or costs of the hospital; or (ii) County builds a new Multi-Specialty Ambulatory Care Clinic ("**MACC**") building or community health clinic or buys a new physical structure housing a MACC or community health clinic and registrations in that new MACC or community health clinic exceed five thousand (5,000) visits per month for (3) three consecutive months (individually each, and collectively both are referred to as an "**Approved Physical Growth Event**"). For purposes of this Authorized Billing and Payment Mechanism, if the County makes the EHR System available for another department of the (i) County ("**Department**"), (ii) Affiliate User, (iii) federal, State, and local agencies, or (iv) business partners to use as a primary EHR system in connection with the Department's, Affiliate User's, federal, State, and local agencies', or business partners' day-to-day operations, then that Department, Affiliate User, federal, State, and local agency, or business partner will be deemed to meet the building of new physical structure requirement under this Section 2.3(ii) (Approved Physical Growth Event) and the Approved Physical Growth Event pricing set forth in this Exhibit C (Fees; Professional Service Rates) will apply.

The fees to be paid by County to Contractor for an Approved Physical Growth Event are set forth in Exhibit C.4 (Approved Physical Growth Event Pricing).

2.4 OPTIONAL WORK AND DISCOUNTS

(a) Payment of Optional Work shall be as set forth in Sections 9.8 (Optional Work) and 14.6 (Implementing Optional Work) and, as to Professional Services, at the Professional Service Rates for Optional Work set forth in Exhibit C.7 (Contractor Professional Services Rate Card). Contractor has also provided optional pricing for additional Licensed Software, and related Services, as set forth in Exhibit C.1 (Optional Work).

The discount percentage to be applied to New Software pursuant to Section 14.6.1 (New Software) of the Agreement shall be **Proprietary and Confidential** off of the price for such New Software that would otherwise be applicable to County's use as determined by utilizing Contractor's standard pricing metrics for the applicable New Software.

(b) Contractor agrees that as to the Jail Health Information System Agreement and Probation Electronic Medical Records System Agreement between Contractor and County (individually referred to as an "**Existing Agreement**" and collectively the, "**Existing Agreements**"): (i) the discount percentage to be applied to New Software as set forth in Section 2.4(a) under this Exhibit C (Fees; Contractor Professional Service Rates) shall, at County's option, be applicable to software to be obtained from Contractor under the Existing Agreements which was not acquired as of the effective date of the applicable Existing Agreement and is not otherwise to be provided to County under those Existing Agreements without additional fees; and (ii) the Professional Service Rates for Optional Work set forth in Exhibit C.1 (Optional Work) shall, at County's option, be applicable to professional services or work to be obtained from Contractor utilizing pool dollars or other Board-approved sums under the Existing Agreements. As to Section 2.4(b)(ii), to the extent different descriptions were utilized to identify the categories/roles of Contractor

resources in the Existing Agreement(s) as compared to the categories/roles used in Exhibit C.1 (Optional Work), the Parties will reconcile such categories/roles used in this Agreement with those used in the Existing Agreement.

Contractor also agrees that, in the event the County consolidates remote hosting services it provides under the Existing Agreement(s) under the same EHR System build utilized to provide the Hosting Services under this Agreement, Contractor will work with County in good faith to adjust the pricing for remote hosting services provided under the Existing Agreements to leverage the infrastructure built to support the Hosting Services provided under this Agreement. County understands that in such event there will be additional professional services required for the migration/consolidation onto the EHR System build of the Jail Health Information System and Probation Electronic Medical Records System and their respective data. Such services will be provided utilizing the fees set forth for Professional Services under Exhibit C.1 (Optional Work) under an approved Amendment of one or all of this Agreement and/or the Existing Agreements.

Contractor also agrees that in recognition of its relationship with County and multiple departments, and the need for communication regarding patient care among those departments, that it will make the functionality as specifically set forth in Exhibit EE (Interoperability Functionality) available under the Existing Agreements at no additional charge. It is understood that the functionality provided will be pursuant to modifications, as appropriate, under each of the Existing Agreements, and specifically as limited by Exhibit EE (Interoperability Functionality).

2.5 AMENDMENTS

Amendments to the Agreement are governed by Section 13.3 (Amendments) of the Agreement.

2.6 POST-CONTRACT YEAR 10 COST OF LIVING ADJUSTMENTS

The COLA adjustment, if any, during the Support Renewal Term, shall by governed Section 14.9 (Cost Of Living Adjustment) of the Agreement.

3. HOSTING SERVICES ASSUMPTIONS REGARDING INFRASTRUCTURE DOMAINS

The Hosting Services are provided with the assumption that only the following five (5) infrastructure domains will be provided by Contractor.

Infrastructure Domain	Infrastructure Domain Description
Production Infrastructure Domain	One (1) Production Infrastructure Domain available in accordance with the Implementation Services and Exhibit A.25.1 (Project Work Plan) and continuing through the Support Term.
Certification Infrastructure Domain (Non-Production)	One (1) Certification Infrastructure Domain (Non-Production) available in accordance with the Implementation Services and Exhibit A.25.1 (Project Work Plan) and continuing through the Support Term (this Infrastructure Domain utilizes a reference Data copy of the Production Infrastructure Domain, and does not include a full copy of the Production Infrastructure

	Domain). (Note: The certification domain is used for ongoing testing and end-user training.)
Build Infrastructure Domain (Non-Production)	One (1) Build Infrastructure Domain (Non-Production) available in accordance with the Implementation Services and Exhibit A.25.1 (Project Work Plan) and continuing through the Support Term (this Infrastructure Domain utilizes a reference Data copy of the Production Infrastructure Domain, and does not include a full copy of the Production Infrastructure Domain).
Training Infrastructure Domain (Non-Production)	One (1) Training Infrastructure Domain (Non-Production) available in accordance with the Implementation Services and Exhibit A.25.1 (Project Work Plan) and continuing through the Support Term (this Infrastructure Domain utilizes a reference Data copy of the appropriate source Infrastructure Domain, and does not include a full copy of the Production Infrastructure Domain).
Mock Infrastructure Domain (Non-Production)	One (1) Mock Infrastructure Domain (Non-Production) to support the implementation of Mock Upgrades available in accordance with the Implementation Services and Exhibit A.25.1 (Project Work Plan) and continuing through the Support Term (this Infrastructure Domain utilizes a reference Data copy of the Production Infrastructure Domain, and does not include a full copy of the Production Infrastructure Domain).

Exhibit C.1 (Optional Work)

to the

Electronic Health Records System and Services Agreement

EXHIBIT C.1

OPTIONAL WORK

This Exhibit C.1 (Optional Work) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. This Exhibit C.1 (Optional Work) sets forth the Optional Work, including New Software and Professional Services, provided by Contractor in accordance with the Agreement. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

All pricing below is valid for five (5) Contract Years from the Effective Date, excluding Contractor's Cardiology option described below (the valid timeframe for this option is set forth below).

1. **ETREBY HOSTING SERVICES (APPLICABLE TO THE ETREBY SOFTWARE ACQUIRED BY THE COUNTY UNDER A SEPARATE AGREEMENT BETWEEN COUNTY, CONTRACTOR, AND/OR A THIRD-PARTY)**

Scope of Use Metric	Scope of Use Limit	One Time Fee	Monthly Recurring Fees
Etreby Users	215 Peak Concurrent Users of Etreby	$56,800	$28,400
Pharmacy Orders	4,000,000 per Contract Year		

"**Peak Concurrent Users of Etreby**" shall have same meaning as Peak Concurrent Users as defined in Section 2.2.3 (Concurrent User Definitions) of Exhibit C (Fees; Contractor Professional Services Rates), except the measurement is taken separately of users of the Etreby application only, and references to "Hosting Services" in the definition shall be deemed to refer to "Etreby."

2. **EXPANSION FEES FOR ETREBY HOSTING SERVICES**

Etreby Use Metric	Additional Use Metric	One Time Fee	Additional Recurring Monthly Fee
Peak Concurrent Users of Etreby	10 Peak Concurrent Users of Etreby	$1,200	$600
Etreby Pharmacy Orders (per Month)	10,000 Pharmacy Orders per Month	$1,000	$500

NOTE: If applicable, this does not include any migration Services fees which may be necessary to transition from a client-hosted environment to Contractor's Hosting Services.

3. EXPANSION FEES FOR CAREAWARE IBUS BEDSIDE MEDICAL DEVICE CONNECTIVITY

Product Description	Additional Use Metric	One Time Fees	Additional Recurring Monthly Fee
Cerner Connectivity Engine	One Additional **room** needing in-room equipment beyond the initial scope	$1,064	$4
Device Adapter	One additional **bedside medical device** needing to be connected to a Cerner Connectivity Engine	$244	$2

4. LIGHTHOUSE SOLUTIONS

County can select up to one (1) optional Lighthouse Continuous Quality Improvement solution Licensed Software (each a "**Lighthouse Offering**") per Contract Year. Once selected, each Lighthouse Offering shall remain available for use by County through the Support Term (e.g., the acquisition of Lighthouse Offering will accumulate over the Support Term.) The cost of each selected Lighthouse Offerings is shown in the table below; except for Hosting Services fees, the fees for multiple Lighthouse Offerings are additive.

Fee Components	Fee
Annual Lighthouse Fee per Lighthouse Offering	$ 45,009
Lighthouse Implementation Services per Lighthouse Offering	$ 154,500
Travel Costs per Lighthouse Offering	$ 27,870
Remote Hosting Annual Fees	$ 18,000
▪ Assumes start date not sooner than the Productive Use of the First Cluster. ▪ Assumes not more than one (1) Lighthouse Offerings implementation per Contract Year, and no more than a total of eight (8) Lighthouse Offerings. ▪ Hosting Services fees do not increase over Eighteen Thousand Dollars ($18,000) annually for additional Lighthouse Offerings.	

5. ENTERPRISE DATA WAREHOUSE*:

One time cost:	$678,604
First 5 Contract Years Ongoing Costs:	$2,015,544
Each Contract Year 6 thru 15:	$403,109
15 YEAR TOTAL:	**$6,725,238**
Travel Costs:	**$24,000**

*Includes Hosting Services and Implementation Services. No data conversion Services are included.

6. CLINICAL EXCHANGE PLATFORM (HIE, REPLACEMENT OF LANES):

Product Description	Number of Use Unit Increment(s)	One Time Fee	Monthly Recurring Fees
Use of the entire Clinical Exchange Platform	1	$210,000	$12,000

Note:
This is the base fee for setting up the Clinical Exchange Platform Services and Licensed Software. Adding additional organizations does not change this cost.
Clinical Exchange Platform Services and Licensed Software are delivered remotely through the Contractor's Hosting Services.

A. CLINICAL EXCHANGE PLATFORM – DHS CONNECTION

Product Description	Additional Use Metric	One Time Fee	Monthly Recurring Fees
Admissions + Outpatient Visits: Sum of the annual admissions plus the annual outpatient visits, whereas an outpatient visit is defined as a visit by a patient who either receives ambulatory services or is lodged in the hospital less than 24 hours while receiving medical, dental or other services.	2,775,000	$0	$37,268
EXPANSION to other hospitals/clinics. This cost would be borne by the participating HIE hospital or clinic added and be based upon admission and outpatient visits for the added facility. The pricing listed is for comparison purposes and could vary.	277,500		$3,729

B. CLINICAL EXCHANGE PLATFORM – COMMUNITY PHYSICIAN CONNECTION

Scope of Use Metric	Scope of Use Limit	One Time Fee	Monthly Recurring Fees
Provider - A health professional that is legally able to write prescriptions - physicians (M.D., D.O.), physician's assistants, or other advanced practitioners.	100	$0	$1,000
EXPANSION to additional physicians	10		$100

Professional Services: $12,500
Travel Costs: $ 5,000

7. DOCUMENT IMAGING DATA CONVERSION FEES:

Contractor would convert County's existing document images into Contractor's ProVision Document Imaging Licensed Software for a cost of $.005 cents per image, with a minimum of 2 million images.

Depending upon the scope of the historical upload, additional Professional Services will be required.

8. END USER TRAINING AND TRAVEL:

Description	Number of Trainers	Weeks	Fixed Fee
Costs for trainers to perform training for all End Users at all Clusters	1003	18	$4,814,400
Fixed fee travel expenses for six (6) day, five (5) night trips	1003	18	$1,810,315

9. CARDIOLOGY:

	One-Time Fees	Recurring Yearly Costs
Hemodynamics		
SLSW & Hardware-Merge	$773,200.00	$70,333.33
Implementation	$88,722.22	
Travel	$25,000.00	

NOTE: If County decides to not purchase Merge Hemodynamics, the discreet data will not flow from the non-Merge Hemo system to Merge Cardiovascular system or the Structured Reporting module. Only a PDF report from the non-Merge Hemo system will be stored to Millennium. This will result in a cumbersome and undesirable workflow for the Cardiologists and will not keep the record whole in the EHR System.		
Cardiovascular		
Cerner LSW	$291,150.00	$52,407.12
SLSW & Hardware	$3,596,506.48	$146,666.67
Implementation	$1,409,306.66	
Hosting Services fees	$120,000.00	$540,000.00
Travel	$525,000.00	
NOTE: Pricing is guaranteed for 2 years from the Effective Date.		

Cardiovascular data migration is included for Cath, Echo and Vascular studies.

Quote assumes use of existing ECG carts. New DICOM ECG carts are $13,000 each.

Exhibit C.2 (Milestone Payments Table)

to the

Electronic Health Records System and Services Agreement

		Contract Initiation Event	Completion of Project Initiation	Complete Design	Complete Build	Complete Test	Productive Use Cluster 1 (IP and OP)	Productive Use Cluster 2 (OP)	Productive Use Cluster 3 (IP and OP)	Productive Use Cluster 4 (OP)	Productive Use Cluster 5 (IP and OP)	Productive Use Cluster 6 (IP and OP)	Final Acceptance by County	Hosting Services	Clinical Content	Support	Application Management Services (AMS)	Third Party Products (ASP)	Hardware and Third Party Software Support
Ten Year Total	**$ 188,960,572**																		
Fifteen Year Total	**$ 268,602,178**																		
Milestone Allocation		10%	6%	17%	17%	5%	10%	4%	8%	2%	7%	6%	8%						
Total Milestone Payments	68,389,347	$ 6,838,935	$ 4,103,361	$11,626,189	$ 11,626,189	$ 3,419,467	$ 6,838,935	$ 2,735,574	$ 5,471,148	$ 1,367,787	$ 4,787,254	$ 4,103,361	$ 5,471,148						
Milestone Duration per Project Work Plan (Months)		1	5	7	4	2	1	1	6	5	2	2	1						
Milestone Monthly Payment		6,838,935	738,605	1,494,796	2,615,893	1,538,760	6,155,041	2,462,016	820,672	246,202	2,154,264	1,846,512	5,471,148						
Milestone Holdback Amount			410,336	1,162,619	1,162,619	341,947	683,893	273,557	547,115	136,779	478,725	410,336							
Credit Due Date		1/28/2013	6/12/2013	1/8/2014	5/7/2014	7/9/2014	7/30/2014	9/24/2014	3/18/2015	8/13/2015	10/15/2015	12/27/2015	Not Applicable						
Key Deliverables		See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6	See exhibit C.6						
12/29/2012	Contract Initiation Event	6,838,935																	
1/1/2013	Month 1		738,605																
2/1/2013	Month 2		738,605																
3/1/2013	Month 3		738,605																
4/1/2013	Month 4		738,605																
5/1/2013	Month 5		738,605																
Key Milestone Approval - Completion of Project Initiation			410,336																
6/1/2013	Month 6			1,494,796															
7/1/2013	Month 7			1,494,796															
8/1/2013	Month 8			1,494,796															
9/1/2013	Month 9			1,494,796															
10/1/2013	Month 10			1,494,796															
11/1/2013	Month 11			1,494,796															
12/1/2013	Month 12			1,494,796															
Key Milestone Approval - Complete Design				1,162,619															
1/1/2014	Month 13				2,615,893														
2/1/2014	Month 14				2,615,893														
3/1/2014	Month 15				2,615,893														
4/1/2014	Month 16				2,615,893														
Key Milestone Approval - Complete Build					1,162,619														
5/1/2014	Month 17					1,538,760													
6/1/2014	Month 18					1,538,760													
Key Milestone Approval - Complete Test						341,947													
7/1/2014	Month 19						6,155,041									43,431	100,173	56,764	60,021
Key Milestone Approval - Productive Use Cluster 1							683,893												
8/1/2014	Month 20							2,462,016								60,804	123,481	56,764	60,021

		Contract Initiation Event	Completion of Project Initiation	Complete Design	Complete Build	Complete Test	Productive Use Cluster 1 (IP and OP)	Productive Use Cluster 2 (OP)	Productive Use Cluster 3 (IP and OP)	Productive Use Cluster 4 (OP)	Productive Use Cluster 5 (IP and OP)	Productive Use Cluster 6 (IP and OP)	Final Acceptance by County	Hosting Services	Clinical Content	Support	Application Management Services (AMS)	Third Party Products (ASP)	Hardware and Third Party Software Support
Key Milestone Approval - Productive Use Cluster 2								273,557											
9/1/2014	Month 21								820,672							60,804	123,481	56,764	60,021
10/1/2014	Month 22								820,672							60,804	123,481	56,764	60,021
11/1/2014	Month 23								820,672							60,804	123,481	56,764	60,021
12/1/2014	Month 24								820,672							60,804	123,481	56,764	60,021
1/1/2015	Month 25								820,672							60,804	123,481	56,764	60,021
2/1/2015	Month 26								820,672							104,235	181,752	56,764	60,021
Key Milestone Approval - Productive Use Cluster 3									547,115										
3/1/2015	Month 27									246,202						104,235	181,752	56,764	60,021
4/1/2015	Month 28									246,202						104,235	181,752	56,764	60,021
5/1/2015	Month 29									246,202						104,235	181,752	56,764	60,021
6/1/2015	Month 30									246,202						104,235	181,752	56,764	60,021
7/1/2015	Month 31									246,202						121,608	205,060	56,764	60,021
Key Milestone Approval - Productive Use Cluster 4										136,779									
8/1/2015	Month 32										2,154,264					121,608	205,060	56,764	60,021
9/1/2015	Month 33										2,154,264					147,667	240,022	56,764	60,021
Key Milestone Approval - Productive Use Cluster 5											478,725								
10/1/2015	Month 34											1,846,512				147,667	240,022	56,764	60,021
11/1/2015	Month 35											1,846,512				173,725	274,985	56,764	60,021
Key Milestone Approval - Productive Use Cluster 6												410,336							
12/1/2015	Month 36													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2016	Month 37													452,800	323,225	173,725	274,985	56,764	60,021
Key Milestone Approval - Final Acceptance by County													5,471,148						
2/1/2016	Month 38													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2016	Month 39													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2016	Month 40													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2016	Month 41													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2016	Month 42													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2016	Month 43													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2016	Month 44													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2016	Month 45													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2016	Month 46													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2016	Month 47													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2016	Month 48													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2017	Month 49													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2017	Month 50													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2017	Month 51													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2017	Month 52													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2017	Month 53													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2017	Month 54													452,800	323,225	173,725	274,985	56,764	60,021

		Contract Initiation Event	Completion of Project Initiation	Complete Design	Complete Build	Complete Test	Productive Use Cluster 1 (IP and OP)	Productive Use Cluster 2 (OP)	Productive Use Cluster 3 (IP and OP)	Productive Use Cluster 4 (OP)	Productive Use Cluster 5 (IP and OP)	Productive Use Cluster 6 (IP and OP)	Final Acceptance by County	Hosting Services	Clinical Content	Support	Application Management Services (AMS)	Third Party Products (ASP)	Hardware and Third Party Software Support
7/1/2017	Month 55													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2017	Month 56													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2017	Month 57													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2017	Month 58													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2017	Month 59													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2017	Month 60													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2018	Month 61													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2018	Month 62													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2018	Month 63													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2018	Month 64													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2018	Month 65													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2018	Month 66													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2018	Month 67													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2018	Month 68													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2018	Month 69													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2018	Month 70													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2018	Month 71													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2018	Month 72													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2019	Month 73													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2019	Month 74													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2019	Month 75													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2019	Month 76													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2019	Month 77													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2019	Month 78													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2019	Month 79													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2019	Month 80													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2019	Month 81													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2019	Month 82													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2019	Month 83													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2019	Month 84													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2020	Month 85													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2020	Month 86													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2020	Month 87													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2020	Month 88													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2020	Month 89													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2020	Month 90													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2020	Month 91													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2020	Month 92													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2020	Month 93													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2020	Month 94													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2020	Month 95													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2020	Month 96													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2021	Month 97													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2021	Month 98													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2021	Month 99													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2021	Month 100													452,800	323,225	173,725	274,985	56,764	60,021
5/1/2021	Month 101													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2021	Month 102													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2021	Month 103													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2021	Month 104													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2021	Month 105													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2021	Month 106													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2021	Month 107													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2021	Month 108													452,800	323,225	173,725	274,985	56,764	60,021
1/1/2022	Month 109													452,800	323,225	173,725	274,985	56,764	60,021
2/1/2022	Month 110													452,800	323,225	173,725	274,985	56,764	60,021
3/1/2022	Month 111													452,800	323,225	173,725	274,985	56,764	60,021
4/1/2022	Month 112													452,800	323,225	173,725	274,985	56,764	60,021

		Contract Initiation Event	Completion of Project Initiation	Complete Design	Complete Build	Complete Test	Productive Use Cluster 1 (IP and OP)	Productive Use Cluster 2 (OP)	Productive Use Cluster 3 (IP and OP)	Productive Use Cluster 4 (OP)	Productive Use Cluster 5 (IP and OP)	Productive Use Cluster 6 (IP and OP)	Final Acceptance by County	Hosting Services	Clinical Content	Support	Application Management Services (AMS)	Third Party Products (ASP)	Hardware and Third Party Software Support
5/1/2022	Month 113													452,800	323,225	173,725	274,985	56,764	60,021
6/1/2022	Month 114													452,800	323,225	173,725	274,985	56,764	60,021
7/1/2022	Month 115													452,800	323,225	173,725	274,985	56,764	60,021
8/1/2022	Month 116													452,800	323,225	173,725	274,985	56,764	60,021
9/1/2022	Month 117													452,800	323,225	173,725	274,985	56,764	60,021
10/1/2022	Month 118													452,800	323,225	173,725	274,985	56,764	60,021
11/1/2022	Month 119													452,800	323,225	173,725	274,985	56,764	60,021
12/1/2022	Month 120													452,800	323,225	173,725	274,985	56,764	60,021
Years 1 - 10 Total		**6,838,935**	**4,103,361**	**11,626,189**	**11,626,189**	**3,419,467**	**6,838,935**	**2,735,574**	**5,471,148**	**1,367,787**	**4,787,254**	**4,103,361**	**5,471,148**	**38,488,000**	**27,474,143**	**16,408,355**	**26,288,652**	**5,789,914**	**6,122,161**
1/01/23	Month 121													452,800	323,225	173,725	274,985	51,607	51,018
2/01/23	Month 122													452,800	323,225	173,725	274,985	51,607	51,018
3/01/23	Month 123													452,800	323,225	173,725	274,985	51,607	51,018
4/01/23	Month 124													452,800	323,225	173,725	274,985	51,607	51,018
5/01/23	Month 125													452,800	323,225	173,725	274,985	51,607	51,018
6/01/23	Month 126													452,800	323,225	173,725	274,985	51,607	51,018
7/01/23	Month 127													452,800	323,225	173,725	274,985	51,607	51,018
8/01/23	Month 128													452,800	323,225	173,725	274,985	51,607	51,018
9/01/23	Month 129													452,800	323,225	173,725	274,985	51,607	51,018
10/01/23	Month 130													452,800	323,225	173,725	274,985	51,607	51,018
11/01/23	Month 131													452,800	323,225	173,725	274,985	51,607	51,018
12/01/23	Month 132													452,800	323,225	173,725	274,985	51,607	51,018
1/01/24	Month 133													452,800	323,225	173,725	274,985	51,607	51,018
2/01/24	Month 134													452,800	323,225	173,725	274,985	51,607	51,018
3/01/24	Month 135													452,800	323,225	173,725	274,985	51,607	51,018
4/01/24	Month 136													452,800	323,225	173,725	274,985	51,607	51,018
5/01/24	Month 137													452,800	323,225	173,725	274,985	51,607	51,018
6/01/24	Month 138													452,800	323,225	173,725	274,985	51,607	51,018
7/01/24	Month 139													452,800	323,225	173,725	274,985	51,607	51,018
8/01/24	Month 140													452,800	323,225	173,725	274,985	51,607	51,018
9/01/24	Month 141													452,800	323,225	173,725	274,985	51,607	51,018
10/01/24	Month 142													452,800	323,225	173,725	274,985	51,607	51,018
11/01/24	Month 143													452,800	323,225	173,725	274,985	51,607	51,018
12/01/24	Month 144													452,800	323,225	173,725	274,985	51,607	51,018
1/01/25	Month 145													452,800	323,225	173,725	274,985	51,607	51,018
2/01/25	Month 146													452,800	323,225	173,725	274,985	51,607	51,018
3/01/25	Month 147													452,800	323,225	173,725	274,985	51,607	51,018
4/01/25	Month 148													452,800	323,225	173,725	274,985	51,607	51,018
5/01/25	Month 149													452,800	323,225	173,725	274,985	51,607	51,018
6/01/25	Month 150													452,800	323,225	173,725	274,985	51,607	51,018
7/01/25	Month 151													452,800	323,225	173,725	274,985	51,607	51,018
8/01/25	Month 152													452,800	323,225	173,725	274,985	51,607	51,018
9/01/25	Month 153													452,800	323,225	173,725	274,985	51,607	51,018
10/01/25	Month 154													452,800	323,225	173,725	274,985	51,607	51,018
11/01/25	Month 155													452,800	323,225	173,725	274,985	51,607	51,018
12/01/25	Month 156													452,800	323,225	173,725	274,985	51,607	51,018
1/01/26	Month 157													452,800	323,225	173,725	274,985	51,607	51,018
2/01/26	Month 158													452,800	323,225	173,725	274,985	51,607	51,018
3/01/26	Month 159													452,800	323,225	173,725	274,985	51,607	51,018
4/01/26	Month 160													452,800	323,225	173,725	274,985	51,607	51,018
5/01/26	Month 161													452,800	323,225	173,725	274,985	51,607	51,018
6/01/26	Month 162													452,800	323,225	173,725	274,985	51,607	51,018
7/01/26	Month 163													452,800	323,225	173,725	274,985	51,607	51,018
8/01/26	Month 164													452,800	323,225	173,725	274,985	51,607	51,018
9/01/26	Month 165													452,800	323,225	173,725	274,985	51,607	51,018
10/01/26	Month 166													452,800	323,225	173,725	274,985	51,607	51,018
11/01/26	Month 167													452,800	323,225	173,725	274,985	51,607	51,018
12/01/26	Month 168													452,800	323,225	173,725	274,985	51,607	51,018
1/01/27	Month 169													452,800	323,225	173,725	274,985	51,607	51,018

		Contract Initiation Event	Completion of Project Initiation	Complete Design	Complete Build	Complete Test	Productive Use Cluster 1 (IP and OP)	Productive Use Cluster 2 (OP)	Productive Use Cluster 3 (IP and OP)	Productive Use Cluster 4 (OP)	Productive Use Cluster 5 (IP and OP)	Productive Use Cluster 6 (IP and OP)	Final Acceptance by County	Hosting Services	Clinical Content	Support	Application Management Services (AMS)	Third Party Products (ASP)	Hardware and Third Party Software Support
2/01/27	Month 170													452,800	323,225	173,725	274,985	51,607	51,018
3/01/27	Month 171													452,800	323,225	173,725	274,985	51,607	51,018
4/01/27	Month 172													452,800	323,225	173,725	274,985	51,607	51,018
5/01/27	Month 173													452,800	323,225	173,725	274,985	51,607	51,018
6/01/27	Month 174													452,800	323,225	173,725	274,985	51,607	51,018
7/01/27	Month 175													452,800	323,225	173,725	274,985	51,607	51,018
8/01/27	Month 176													452,800	323,225	173,725	274,985	51,607	51,018
9/01/27	Month 177													452,800	323,225	173,725	274,985	51,607	51,018
10/01/27	Month 178													452,800	323,225	173,725	274,985	51,607	51,018
11/01/27	Month 179													452,800	323,225	173,725	274,985	51,607	51,018
12/01/27	Month 180													452,800	323,225	173,725	274,985	51,607	51,018
Years 11 - 15 Total		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**27,168,000**	**19,393,513**	**10,423,518**	**16,499,074**	**3,096,420**	**3,061,081**
15 Year Total		**6,838,935**	**4,103,361**	**11,626,189**	**11,626,189**	**3,419,467**	**6,838,935**	**2,735,574**	**5,471,148**	**1,367,787**	**4,787,254**	**4,103,361**	**5,471,148**	**65,656,000**	**46,867,656**	**26,831,874**	**42,787,726**	**8,886,334**	**9,183,242**

Exhibit C.3 (Pricing Spreadsheet)

to the

Electronic Health Records System and Services Agreement

Milestone Payments Items That Transition are highlighted in blue below											
		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
Included In Milestone Payments		Proprietary and Confidential									
12/29/2012	Contract Initiation Event				50,400		3,188,800	-	-		
1/1/2013	Month 1				182,988		160,365	-	-		
2/1/2013	Month 2				182,988		160,365	-	-		
3/1/2013	Month 3				182,988		160,365	-	-		
4/1/2013	Month 4				182,988		160,365	-	-		
5/1/2013	Month 5				182,988		160,365	-	-		
6/1/2013	Month 6				182,988		160,365	-	-		
7/1/2013	Month 7				182,988		160,365	-	-		
8/1/2013	Month 8				182,988		160,365	-	-		
9/1/2013	Month 9				182,988		160,365	-	-		
10/1/2013	Month 10				182,988		160,365	-	-		
11/1/2013	Month 11				182,988		160,365	-	-		
12/1/2013	Month 12				182,988		160,365	-	-		
1/1/2014	Month 13				182,988		160,365	-	-		
2/1/2014	Month 14				182,988		160,365	-	-		
3/1/2014	Month 15				182,988		160,365	-	-		
4/1/2014	Month 16				182,988		160,365	-	-		
5/1/2014	Month 17				182,988		160,365	-	-		
6/1/2014	Month 18				182,988		160,365	-	-		
7/1/2014	Month 19			60,021	323,225	56,764	160,365	100,173	43,431	Productive Use Cluster 1	25%
8/1/2014	Month 20			60,021	323,225	56,764	160,365	123,481	60,804	Productive Use Cluster 2	10%
9/1/2014	Month 21			60,021	323,225	56,764	160,365	123,481	60,804		
10/1/2014	Month 22			60,021	323,225	56,764	160,365	123,481	60,804		
11/1/2014	Month 23			60,021	323,225	56,764	160,365	123,481	60,804		
12/1/2014	Month 24			60,021	323,225	56,764	160,365	123,481	60,804		
1/1/2015	Month 25			60,021	323,225	56,764	160,365	123,481	60,804		
2/1/2015	Month 26			60,021	323,225	56,764	340,325	181,752	104,235	Productive Use Cluster 3	25%
3/1/2015	Month 27			60,021	323,225	56,764	340,325	181,752	104,235		

		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
4/1/2015	Month 28			60,021	**323,225**	56,764	**340,325**	181,752	104,235		
5/1/2015	Month 29			60,021	**323,225**	56,764	**340,325**	181,752	104,235		
6/1/2015	Month 30			60,021	**323,225**	56,764	**340,325**	181,752	104,235		
7/1/2015	Month 31			60,021	**323,225**	56,764	**340,325**	205,060	121,608	Productive Use Cluster 4	10%
8/1/2015	Month 32			60,021	**323,225**	56,764	**340,325**	205,060	121,608		
9/1/2015	Month 33			60,021	**323,225**	56,764	**340,325**	240,022	147,667	Productive Use Cluster 5	15%
10/1/2015	Month 34			60,021	**323,225**	56,764	**340,325**	240,022	147,667		
11/1/2015	Month 35			60,021	**323,225**	56,764	**452,800**	274,985	173,725	Productive Use Cluster 6	15%
12/1/2015	Month 36			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2016	Month 37			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2016	Month 38			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2016	Month 39			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2016	Month 40			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2016	Month 41			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2016	Month 42			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2016	Month 43			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2016	Month 44			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2016	Month 45			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2016	Month 46			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2016	Month 47			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2016	Month 48			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2017	Month 49			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2017	Month 50			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2017	Month 51			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2017	Month 52			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2017	Month 53			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2017	Month 54			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2017	Month 55			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2017	Month 56			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2017	Month 57			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2017	Month 58			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2017	Month 59			60,021	323,225	56,764	452,800	274,985	173,725		

		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
12/1/2017	Month 60			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2018	Month 61			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2018	Month 62			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2018	Month 63			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2018	Month 64			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2018	Month 65			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2018	Month 66			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2018	Month 67			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2018	Month 68			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2018	Month 69			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2018	Month 70			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2018	Month 71			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2018	Month 72			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2019	Month 73			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2019	Month 74			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2019	Month 75			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2019	Month 76			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2019	Month 77			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2019	Month 78			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2019	Month 79			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2019	Month 80			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2019	Month 81			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2019	Month 82			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2019	Month 83			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2019	Month 84			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2020	Month 85			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2020	Month 86			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2020	Month 87			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2020	Month 88			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2020	Month 89			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2020	Month 90			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2020	Month 91			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2020	Month 92			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2020	Month 93			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2020	Month 94			60,021	323,225	56,764	452,800	274,985	173,725		

		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
11/1/2020	Month 95			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2020	Month 96			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2021	Month 97			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2021	Month 98			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2021	Month 99			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2021	Month 100			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2021	Month 101			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2021	Month 102			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2021	Month 103			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2021	Month 104			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2021	Month 105			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2021	Month 106			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2021	Month 107			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2021	Month 108			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2022	Month 109			60,021	323,225	56,764	452,800	274,985	173,725		
2/1/2022	Month 110			60,021	323,225	56,764	452,800	274,985	173,725		
3/1/2022	Month 111			60,021	323,225	56,764	452,800	274,985	173,725		
4/1/2022	Month 112			60,021	323,225	56,764	452,800	274,985	173,725		
5/1/2022	Month 113			60,021	323,225	56,764	452,800	274,985	173,725		
6/1/2022	Month 114			60,021	323,225	56,764	452,800	274,985	173,725		
7/1/2022	Month 115			60,021	323,225	56,764	452,800	274,985	173,725		
8/1/2022	Month 116			60,021	323,225	56,764	452,800	274,985	173,725		
9/1/2022	Month 117			60,021	323,225	56,764	452,800	274,985	173,725		
10/1/2022	Month 118			60,021	323,225	56,764	452,800	274,985	173,725		
11/1/2022	Month 119			60,021	323,225	56,764	452,800	274,985	173,725		
12/1/2022	Month 120			60,021	323,225	56,764	452,800	274,985	173,725		
1/1/2023	Month 121			51,018	323,225	51,607	452,800	274,985	173,725		
2/1/2023	Month 122			51,018	323,225	51,607	452,800	274,985	173,725		
3/1/2023	Month 123			51,018	323,225	51,607	452,800	274,985	173,725		
4/1/2023	Month 124			51,018	323,225	51,607	452,800	274,985	173,725		
5/1/2023	Month 125			51,018	323,225	51,607	452,800	274,985	173,725		
6/1/2023	Month 126			51,018	323,225	51,607	452,800	274,985	173,725		
7/1/2023	Month 127			51,018	323,225	51,607	452,800	274,985	173,725		
8/1/2023	Month 128			51,018	323,225	51,607	452,800	274,985	173,725		
9/1/2023	Month 129			51,018	323,225	51,607	452,800	274,985	173,725		

		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
10/1/2023	Month 130			51,018	323,225	51,607	452,800	274,985	173,725		
11/1/2023	Month 131			51,018	323,225	51,607	452,800	274,985	173,725		
12/1/2023	Month 132			51,018	323,225	51,607	452,800	274,985	173,725		
1/1/2024	Month 133			51,018	323,225	51,607	452,800	274,985	173,725		
2/1/2024	Month 134			51,018	323,225	51,607	452,800	274,985	173,725		
3/1/2024	Month 135			51,018	323,225	51,607	452,800	274,985	173,725		
4/1/2024	Month 136			51,018	323,225	51,607	452,800	274,985	173,725		
5/1/2024	Month 137			51,018	323,225	51,607	452,800	274,985	173,725		
6/1/2024	Month 138			51,018	323,225	51,607	452,800	274,985	173,725		
7/1/2024	Month 139			51,018	323,225	51,607	452,800	274,985	173,725		
8/1/2024	Month 140			51,018	323,225	51,607	452,800	274,985	173,725		
9/1/2024	Month 141			51,018	323,225	51,607	452,800	274,985	173,725		
10/1/2024	Month 142			51,018	323,225	51,607	452,800	274,985	173,725		
11/1/2024	Month 143			51,018	323,225	51,607	452,800	274,985	173,725		
12/1/2024	Month 144			51,018	323,225	51,607	452,800	274,985	173,725		
1/1/2025	Month 145			51,018	323,225	51,607	452,800	274,985	173,725		
2/1/2025	Month 146			51,018	323,225	51,607	452,800	274,985	173,725		
3/1/2025	Month 147			51,018	323,225	51,607	452,800	274,985	173,725		
4/1/2025	Month 148			51,018	323,225	51,607	452,800	274,985	173,725		
5/1/2025	Month 149			51,018	323,225	51,607	452,800	274,985	173,725		
6/1/2025	Month 150			51,018	323,225	51,607	452,800	274,985	173,725		
7/1/2025	Month 151			51,018	323,225	51,607	452,800	274,985	173,725		
8/1/2025	Month 152			51,018	323,225	51,607	452,800	274,985	173,725		
9/1/2025	Month 153			51,018	323,225	51,607	452,800	274,985	173,725		
10/1/2025	Month 154			51,018	323,225	51,607	452,800	274,985	173,725		
11/1/2025	Month 155			51,018	323,225	51,607	452,800	274,985	173,725		
12/1/2025	Month 156			51,018	323,225	51,607	452,800	274,985	173,725		
1/1/2026	Month 157			51,018	323,225	51,607	452,800	274,985	173,725		
2/1/2026	Month 158			51,018	323,225	51,607	452,800	274,985	173,725		
3/1/2026	Month 159			51,018	323,225	51,607	452,800	274,985	173,725		
4/1/2026	Month 160			51,018	323,225	51,607	452,800	274,985	173,725		
5/1/2026	Month 161			51,018	323,225	51,607	452,800	274,985	173,725		
6/1/2026	Month 162			51,018	323,225	51,607	452,800	274,985	173,725		
7/1/2026	Month 163			51,018	323,225	51,607	452,800	274,985	173,725		
8/1/2026	Month 164			51,018	323,225	51,607	452,800	274,985	173,725		

		Licensed Software	Professional Services & Training	Hardware and Third Party Software	Clinical Content	Third Party Products (ASP)	Hosting Services	Application Management Services (AMS)	Support		
9/1/2026	Month 165			51,018	323,225	51,607	452,800	274,985	173,725		
10/1/2026	Month 166			51,018	323,225	51,607	452,800	274,985	173,725		
11/1/2026	Month 167			51,018	323,225	51,607	452,800	274,985	173,725		
12/1/2026	Month 168			51,018	323,225	51,607	452,800	274,985	173,725		
1/1/2027	Month 169			51,018	323,225	51,607	452,800	274,985	173,725		
2/1/2027	Month 170			51,018	323,225	51,607	452,800	274,985	173,725		
3/1/2027	Month 171			51,018	323,225	51,607	452,800	274,985	173,725		
4/1/2027	Month 172			51,018	323,225	51,607	452,800	274,985	173,725		
5/1/2027	Month 173			51,018	323,225	51,607	452,800	274,985	173,725		
6/1/2027	Month 174			51,018	323,225	51,607	452,800	274,985	173,725		
7/1/2027	Month 175			51,018	323,225	51,607	452,800	274,985	173,725		
8/1/2027	Month 176			51,018	323,225	51,607	452,800	274,985	173,725		
9/1/2027	Month 177			51,018	323,225	51,607	452,800	274,985	173,725		
10/1/2027	Month 178			51,018	323,225	51,607	452,800	274,985	173,725		
11/1/2027	Month 179			51,018	323,225	51,607	452,800	274,985	173,725		
12/1/2027	Month 180			51,018	323,225	51,607	452,800	274,985	173,725		

Exhibit C.4 (Approved Physical Growth Event Pricing)

to the

Electronic Health Records System and Services Agreement

Exhibit C.4

PHYSICAL GROWTH EVENT EXPANSION PRICING

	Allocated Amount of the Contract Sum	Budgeted Beds	One Time Fee Per Budgeted Bed	Annual Fee Per Budgeted Bed
Licensed Software - Inpatient	Proprietary and Confidential	1,476	$5,313	$0
Pass Through - Inpatient		1,476	$785	$0
Support - Inpatient		1,476	$0	$917
Clinical Content - Inpatient		1,476	$0	$734
Third Party Products - Inpatient		1,476	$0	$121
AMS - Inpatient		1,476	$0	$1,453
Pass Through - Inpatient		1,476	$0	$1,347
Total Expansion Fees - Inpatient			**$6,098**	**$4,572**
	Allocated Amount of the Contract Sum	**Outpatient Visits**	**One Time Fee Per Outpatient Visit**	**Annual Fee Per Outpatient Visit**
Licensed Software - Outpatient	Proprietary and Confidential	2,700,000	$1.60	$0.00
Pass Through - Outpatient		2,700,000	$0.05	$0.00
Support - Outpatient		2,700,000	$0.00	$0.28
Clinical Content - Outpatient		2,700,000	$0.00	$0.22
Third Party Products - Outpatient		2,700,000	$0.00	$0.05
AMS - Outpatient		2,700,000	$0.00	$0.43
Pass Through - Outpatient		2,700,000	$0.00	$0.39
Total Expansion Fees - Outpatient			**$1.65**	**$1.37**
	Allocated Amount of the Contract Sum	**Providers**	**One Time Fee Per Provider**	**Annual Fee Per Provider**
ePrescribe - Inpatient/Outpatient	Proprietary and Confidential	2,542	**$0**	**$132.72**

* Includes 3rd Party Software, Clinical Content, and Third Party Products. Does not include on site Hardware

** Expansion Remote Hosting, and Professional Services fees addressed elsewhere

Exhibit C.5 (DHS EHR Users Summary)

to the

Electronic Health Records System and Services Agreement

Exhibit C.5

DHS EHR Users Summary

ITEMS	Full Time	Part Time ~ 50%	□50% Time
Physicians/Independent Practitioners			
Physicians - County	611	109	225
Physicians - Contract	1133	147	237
Affiliated Physicians (i.e., UCLA, USC, MFI, LA Bio Med, etc.)	21	16	45
Volunteer Physicians	18	0	972
Fellows	222	0	11
Residents	0	24	0
County	949	0	87
Non-County Employed (UCLA)	41	424	35
Interns	171	146	0
Medical Students	778	341	14
Military Trainees	158	0	0
Podiatrists	7	3	4
Dentists	15	1	7
Dental Residents (included with Interns/Residents)	44	19	1
Dental Interns (included with Interns/Residents)	14	0	0
Physician Assistants	105	1	1
Nurse Practitioners	300	2	4
CRNAs	78	4	5
Psychologists	18	2	0
Optometrists	10	0	8
Midwives	13	1	0
Nursing			
Asst. Nsg Dir Adm	53	3	0
Nurse Managers	148	7	1
Supervising Clinic Nurses	59	5	0
Supervising Staff Nurses	287	0	0
RNs	4032	43	100
LVNs	612	3	2
Nursing Attendants	644	0	0
Clinic Nursing Attendants	1105	1	93
Certified Medical Assistants	95	0	0
Student Nurse Workers	21	0	3
Student Nurse Affiliates	2	0	31
Technicians			
Surg Techs	120	3	1
Ortho Techs	42	0	0
Orthoptic Techs	5	0	0
Urology Techs	20	1	0
	22	0	0

Imaging			
Radiological Techs	190	1	17
Mammo Techs	26	5	2
Diagnostic Ultrasound Techs	63	22	3
Nuclear Med Techs	24	0	0
CT Techs	16	17	0
MRI Techs	17	3	0
Radiation Therapists	19	0	0
Radiology Supervisory Staff	13	7	0
Pathology/Lab			
Phlebotomy Techs	152	39	0
Clinical Lab Scientists	290	61	4
Clinical Microbiologists	26	14	1
Cytology Lab Techs	22	0	8
Lab Assistants	195	14	9
Blood Gas Laboratory Techs	8	11	0
Autopsy Techs	8	0	1
Morgue Techs	5	0	14
Profusionists	8	5	0
Lab Supervisory Staff	24	20	15
Tissue Analysis Tech	21	0	5
Clerical	10	0	0
Nutrition Services			
Dieticians/Nutritionists	35	3	4
Diet Techs	3	0	143
Nutrition Supervisory Staff	15	0	0
Respiratory/Pulmonary			
Respiratory Care Practitioners	210	2	0
Pulmonary Func Techs	36	0	0
Respiratory/Pulmonary Supv Staff	19	1	1
Social Work			
LCSW	8	0	3
Clinical Social Workers	72	0	7
Medical Case Workers	44	0	6
Community Workers	27	1	0
Social Work Supvisory Staff	35	0	0
Psychiatric Services			
Psychiatric Social Workers	23	0	0
Psychiatric Techs	2	0	0
Medical Case Workers	40	0	0
Psychiatric Services Supervisory Staff	22	0	0
Rehab Services			
Physical Therapists	40	7	0
Occup Therapists	30	9	0
Recreational Therap	13	3	0
Speech Pathologists	9	2	1
Audiologists	11	0	0
Rehab Techs/Aides/Assistants	23	1	2

Rehab Svs Supervisory Staff	54	10	2
Pharmacy Services			
Pharmacists	199	1	2
Clinical Pharmacists	126	7	0
Radiopharmacists	31	0	0
Pharmacy Techs	344	1	5
Pharmacy Helpers	31	0	1
Pharmacy Student	394	4	0
Pharmacy Supervisory Staff	52	4	2
Dental			
Dental Assts	32	0	0
Dental Techs	18	2	0
Dental Hygenists	12	0	1
Cardiac/Neuro Techs			
EEG Techs	10	0	5
Echo Techs	8	2	2
Cardiac Electrodiagnostic Techs/EKG/ECG	55	0	0
Cardiovascular Techs	15	0	0
Pastoral Care			
Chaplains	7	2	22
Pediatric Support			
Child Life specialists	2	0	0
School Teachers	111	28	0
Clerical Support/Registration/Finance			
Registration Staff	433	0	1
Business Office Staff	157	1	2
Admitting/Bed Ctrl	108	5	2
Clerical Support			
Appointment Center Staff	55	12	0
Ward/Unit Clerks	143	0	0
Ancillary/Suppt Staff	1039	8	2
Info Desk/Operators	70	2	5
HIM Staff			
File Room Staff	250	12	0
Coders	368	9	29
Vital Stats Staff	68	0	0
Tumor Registry Staff	26	0	74
Release of Information Staff	41	1	0
HIM Supervisory Staff	82	0	3
Support/Admin Staff Who Access Charts			
Qualify/Risk/Safety Staff	42	6	3
Utilization Management	70	5	0
Infection Control Staff	25	0	11
Interpreters	36	0	2
Pt Advocate/Pt Relations	69	1	0
Organ/Tissue Procurement Agency	30	0	0
IT Facility Staff			
Analysts	106	2	11

Query Writers	15	0	0
DBA	10	1	0
Data Integration	7	2	0
System Manager	23	7	11
Admin/Management			
CEO/COO	9		
CMO/CMIO	11	3	4
CNO	4	1	2
CIO	5	0	5
CFO	26	0	7
Department Directors	36	4	3
Other Admin Staff	83	0	610
Research			
Research Assistants	19	200	14
Other			
Genetic Counselor	1346	66	1792
Cancer Navigator	241	28	9
Human Resources	12	14	2
Prosthetist/Orthotist	59	47	39
Physical Therapy Students	10	9	6
Mastectomy Fitter	31	2	2
Managed Care Member Services Staff	40	4	1
Marketing Representatives	285	28	179
Health Care Interpreters	852	89	146
Expenditure Mgmt	85	4	16
Health Advocates	2	0	1
Boehm & Associates	1	0	16
Total	21758	2188	5185

Exhibit C.6 (Key Milestones and Key Deliverables Table)

to the

Electronic Health Records System and Services Agreement

Exhibit C.6

KEY MILESTONES AND KEY DELIVERABLES TABLE

Key Milestones		Key Deliverables	
Milestone Name	**Milestone Allocation of Fixed Fees, Including Licensed Software, Third-Party Products, Implementation Fees**	**SOW Name**	**Deliverable Name**
Contract Initiation Event	10%	Initiation (SOW 2)	Project Work Plan (Deliverable 4.2), Project Staffing and Resource Management Plan (Deliverable 4.6),
Completion of Project Initiation (completion of L.A. event)	6%	Initiation (SOW 2)	Deliverable 13.1 (Conduct Project Kickoff)
		Hosting (SOW 3)	Deliverable 1.2 (EHR Architecture and Hosting Services Initiation Session)
		Domain (SOWs 4-17)	Deliverable 1.2 (Clinical Statement of Work Initiation Sessions)
		Data Conversion (SOW 18)	Deliverable 1.2 (Data Conversion Initiation Session)
		Security (SOW 19)	Deliverable 1.2 (Security Initiation Session)
		Interfaces (SOW 20)	Deliverable 1.2 (Interfaces Initiation Session)
Complete Design	17%	Initiation (SOW 2)	All Deliverables (Deliverables 1.1-13.1)
		Hosting (SOW 3)	Remote Hosting Services for Design Build Test and Train (Deliverable 5.2)
		Domain (SOWs 4-17)	Final Detailed Design Document (Deliverable 4.5)
		Data Conversion (SOW 18)	Data Conversion Specifications (Deliverable 3.1)
		Security (SOW 19)	System Security Plan (Deliverable 2.2)

		Interfaces (SOW 20)	Interface Test Plan (Deliverable 3.2)
Complete Build	17%	Domain SOWs (SOWs 4-17)	Tested Complete System Build (Deliverable 7.3)
Complete Test	5%	Data Conversion (SOW 18)	Data Conversion Pilot (Deliverable 4.1)
		Security (SOW 19)	Monitoring and Auditing Tools (Deliverable 3.2)
		Interfaces (SOW 20)	Tested Interfaces (Deliverable 4.1)
		Testing (SOW 21)	Parallel Testing (Deliverable 10.2)
Productive Use of Cluster 1 (IP and OP)	10%	Training (SOW 22)	All Deliverables
		Deployment (SOW 23)	Cut over test conducted and documented AND Performance Verification (Deliverables 1.1-9.2)
		M&O (SOW 24)	Requirements for Systems Tools and Interfaces for IT Service Management (Deliverables 2.5), AMS Delivery Model for County (Deliverables 3.1), Hosting Services Delivery Model (Deliverables 4.1)
Productive Use of Cluster 2 (OP)	4%	Deployment (SOW 23)	Performance Verification (Deliverables 10.1)
Productive Use of Cluster 3 (IP and OP)	8%	Deployment (SOW 23)	Performance Verification (Deliverables 10.1)
Productive Use of Cluster 4 (OP)	2%	Deployment (SOW 23)	Performance Verification (Deliverables 10.1)
Productive Use of Cluster 5 (IP and OP)	7%	Deployment (SOW 23)	Performance Verification (Deliverables 10.1)
Productive Use of Cluster 6 (IP and OP)	6%	Deployment (SOW 23)	Performance Verification (Deliverables 10.1)
Final Acceptance by County	8%	Deployment (SOW 23)	Final Acceptance (Deliverables 11.1)

Exhibit C.7 (Contractor Professional Services Rate Card)

to the

Electronic Health Records System and Services Agreement

EXHIBIT C.7

CONTRACTOR PROFESSIONAL SERVICES RATE CARD

2012 ROLES	FFS HOURLY RATE
CLIENT RESULTS EXECUTIVE	Proprietary and Confidential
CLINICAL DESIGNER	
CLINICAL STRATEGIST	
DATA ANALYST	
DELIVERY CONSULTANT	
ENGAGEMENT CONTROLLER	
ENGAGEMENT LEADER	
HEALTHCARE EXECUTIVE	
INTERFACE ARCHITECT	
INTEGRATION ARCHITECT	
LEARNING CONSULTANT	
TRADITIONAL ACE CONSULTANT	
SOLUTION ACE CONSULTANT	
BLENDED RATE ACE CONSULTANT	
ACE ADOPTION COACH	
PHARMACY STRATEGIST	
PHYSICIAN EXECUTIVE	
REVENUE CYCLE ARCHITECT	
REVENUE CYCLE CONSULTANT	
SOFTWARE ENGINEER	
SOLUTION ARCHITECT	
SYSTEM ARCHITECT	
SYSTEM ENGINEER	
TECHNOLOGY ENGINEER	
TECHNICAL ENGAGEMENT EXECUTIVE	
TECHNICAL ENGAGEMENT LEADER	

Exhibit C.8 (Summary of Licensed Software Pricing by Module)

to the

Electronic Health Records System and Services Agreement

EXHIBIT C.8

SUMMARY OF LICENSED SOFTWARE PRICING BY MODULE

Proprietary and Confidential

Exhibit C.9 (Detailed Pricing Summary)

to the

Electronic Health Records System and Services Agreement

Exhibit C.9

DETAILED PRICING SUMMARY

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

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Exhibit D (Hardware)

to the

Electronic Health Records System and Services Agreement

EXHIBIT D

HARDWARE

Detailed Hardware Listing of All Items to be Onsite at County			
Mfg. Part #	**Component**	**Product**	**Quantity**
CW-DEVICEID	FetaLink	Device Adapter	35
13400	FetaLink	Cables to Go - USB cable - Type A (M) - Type B (M)	35
MBST 272006MOD-D	FetaLink	Cable, RJ11 Male to DE9 Female	35
CW-FMCE-1	FetaLink	Fetal Monitor Connectivity Engine includes 4GB CF Card	35
1900HHD-0USB	FetaLink	Honeywell Xenon 1900 2D Scanner Kit, HD, Hosp Plastic,	35
1902HHD-0USB-5	Point of Care	Honeywell Xenon 1902 Cordless 2D Scanner Kit, HD, Hosp	1
ZEBRA BB-ZM400E+	Digi-Trax	ZEBRA BB-ZM400E+, 300 dpi, Serial, Parallel ,Ethernet	5
CFG_IBUS	CareAware Ibus	Cerner CareAware iBus	
CCE-N270/1G-R20IEI	CareAware Ibus	IEI 8.4in Fanless Panel PC SVGA High Brightness Touch	679
A3L791-10	CareAware Ibus	Belkin - Patch cable - RJ-45 (M) - RJ-45 (M) - 10 ft -	679
2011-0503-00	CareAware Ibus	IEI 6-Port CE power brick mounting bracket	679
CW-DEVICEID	CareAware Ibus	Device Adapter	1,000
13400	CareAware Ibus	Cables to Go - USB cable - Type A (M) - Type B (M)	1,000
TOC_STAGE_CE	CareAware Ibus	Setup and Configuration of Connectivity Engine	679
4575B002	Document Imaging	Canon ScanFront 300P	5
CFG_DATAMED_MGATE	Powerchart ECG	DatamedFT Intel server / MGate Server	1
4333343	Powerchart ECG	OEM: DL120 G6 4GB, 2x160GB HD	2
TOC_INSTALL_HRDWRE	Powerchart ECG	Onsite Hardware Installation Services	2
TOC_STAGE_DMFT_MG	Powerchart ECG	DatamedFT Server Configuration	2

Exhibit E (Service Levels and Performance Standards)

to the

Electronic Health Records System and Services Agreement

EXHIBIT E

SERVICE LEVELS AND PERFORMANCE STANDARDS

This Exhibit E (Service Levels And Performance Standards) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. This Exhibit describes the Service Levels to be achieved by Contractor regarding the Licensed Software and Hosting Services. Except as provided in this Exhibit, capitalized terms shall have the meanings set forth in the body of the Agreement.

1. HOSTING OBLIGATIONS

1.1 GENERAL REQUIREMENTS

In addition to the other obligations set forth in the Agreement and this Exhibit, Contractor shall do the following:

- Operate the Hosting Services on Servers owned and maintained by Contractor or the Hosting Provider on a 24x7x365 basis. "**Server**" shall mean the server(s) on which the Hosting Services will be hosted.

- Allow access to the Hosting Services over a dedicated network connection from the Hosting Environment facilities on a 24x7x365 basis and provide secure and confidential storage of all information transmitted to and from the Hosting Services. Contractor provides redundancy at all necessary infrastructure points including: redundant clustered firewalls with redundant private network connections, running industry standard secure inspection, and analysis software.

- Supply hardware, security protocols, software and communications support structure to facilitate connection to the Contractor private network in accordance with the requirements set forth herein.

- Maintain back-up Servers, at Contractor Secondary Data Center, in a geographically different site from where the Servers at Contractor Primary Data Center are located. Back-up Servers are available through a contracted Disaster Recovery service; otherwise, data only is back-up in accordance with Exhibit CC (Enterprise Back-up Policy) and stored at the Contractor Secondary Data Center.

- Review security notifications and alerts relevant to the Hosting Environment (e.g., Contractor notifications of bugs, attacks, patches), and apply as appropriate to maintain the highest level of defense.

- Contractor shall provide adequate firewall protection in order to secure Personal Data and other Confidential Information of County and users of the Hosting Services from unauthorized access by third-parties.

1.2 HOSTING PROVIDER

Contractor shall ensure the Hosting Provider complies with the terms of the Agreement, including the requirements of Exhibit N.1 (Hosting Services) and this Exhibit E (Service Levels and Performance Standards). Contractor shall be jointly and severally liable for any breach by Hosting Provider of the Agreement, including the requirements of this Exhibit E (Service Levels and Performance Standards) and Exhibit N.1 (Hosting Services). As of the Effective Date, "**Hosting Provider**" shall be Contractor.

1.3 CHANGE OF HOSTING PROVIDER

In the event that, during the term of the Agreement, Contractor desires to transition to a new Hosting Provider, Contractor shall provide County with at least sixty (60) calendar days prior notice of the transition. Contractor shall reasonably cooperate with County in evaluating the security and performance of the proposed hosting service. County shall have thirty (30) calendar days from receipt of notice of the transition to reasonably object to the proposed new Hosting Provider. In the event of such objection, the Parties shall negotiate in good faith regarding alternate Hosting Providers. If the Parties are unable to reach agreement within thirty (30) calendar days of receipt by Contractor of the objection, County may elect to terminate this Agreement without further obligation.

2. SERVICE MONITORING AND MANAGEMENT

Contractor will perform continuous monitoring and management of the Hosting Services to optimize Availability of the Licensed Software and Hosting Services for the production Hosting Environment. All other Hosting Environments will be continuously monitored and managed from 9:00 a.m. to 5:00 p.m. Central Time, Monday through Friday. Included within the scope of this Section 2 (Service Monitoring and Management) is the proactive monitoring of the Servers and all service components of Contractor's production Hosting Environment and firewall for trouble on a seven (7) day by twenty-four (24) hour basis, and the expedient restoration of components when failures occur within the time period set forth in Section 7 (Service Outages). Contractor shall provide County the ability to view the Licensed Software and Hosting Services network connectivity and key performance metrics through a system administration portal provided by Contractor. Contractor will monitor and manage the Hosting Environment using its own tools, methodologies, and specifications and notify County of any issue impacting EHR System performance. Contractor shall maintain redundancy in all key components such that Outages are less likely to occur due to individual component failures. Contractor will monitor "heartbeat" signals of all servers, routers, and leased lines, and HTTP availability of the Licensed Software and Hosting Services, by proactive probing at thirty (30) second intervals twenty-four (24) hours a day using an automated tool. If a facility does not respond to a ping-like stimulus, it shall be immediately checked again. When Contractor receives a "down" signal, or otherwise has knowledge of an Outage or Error (including, without limitation, any failure in the Server or application software and/or hardware used to provide the Service), Contractor personnel will:

- Confirm (or disconfirm) the Outage by a direct check of the facility;

- If confirmed, take such action as may restore the service, or, if determined to be an internet service provider or telecom carrier problem, open a trouble ticket with the relevant companies;

- Notify County by telephone or pager according to mutually agreed upon procedures that an Outage has occurred, providing such details as may be available, including the Contractor trouble ticket number, if appropriate, and time of Outage;

- Work each Error until Resolution, escalating to management or to engineering as required; and

- Notify County of final Resolution, along with any pertinent findings or action taken, and request concurrence to close the trouble ticket.

3. BACKUPS

3.1 REGULAR BACK-UPS

Contractor shall provide for both the regular back-up of standard file systems relating to the Server, Licensed Software, and Hosting Services, and the timely restoral of such data on request by County due to a site failure. In particular, Contractor shall:

- Perform weekly full back-ups;

- Perform daily incremental back-ups;

- Send back-up media to secured, off-site storage facilities with a thirty (30) calendar day rotation of media;

- Fulfill restoral requests as directed by County due to site failures. Restoral will be performed in accordance with this Exhibit E (Service Levels and Performance Standards); and

- Periodically review and validate Contractor's backup and recovery procedures, and periodically validate the accuracy and integrity of the backup data. Upon County's request, Contractor will validate that the back-ups of County Data are free from inaccuracies and inconsistencies.

3.2 DATA REPLICATION ACROSS DATA CENTERS

County Data shall be stored on redundant applications and database hardware in Contractor's Primary Data Center and replicated to Contractor's Secondary Data Center in accordance with Exhibit CC (Enterprise Back-up Policy). Data security shall be provided by SSL encryption, IPsec encryption, multiple levels of virus protection, intrusion prevention systems, multi-factor management authentication, enterprise firewalls, and filtering routers. Hosting Environment shall provide redundancy at all tiers of the environment, redundant clustered firewalls with redundant Internet connections, running industry standard secure inspection, and analysis software. Contractor shall utilize methods to minimize data loss due to environmental failures or catastrophic disk failures, and in no event shall there be data loss in excess of twenty-four (24)

hours. Contractor shall utilize tools to securely optimize data back-ups. In the event of a significant Primary Data Center failure, a failover to the Contractor's Secondary Data Center shall be completed. A restoration to the Primary Data Center shall occur at a mutually agreeable time between the Contractor and County.

4. SERVICE LEVELS

4.1 SERVICE REQUEST TRACKING SYSTEM

(a) For use in responding to County's maintenance and Support Requests, Contractor shall maintain an automated Support Request Tracking System ("**SRTS**") with a description of each Support Request, response, and status. Contractor shall regularly review and update all open Support Requests and follow up on unresolved Support Requests. Contractor will provide County "read only" access to the SRTS for County's separate review of all open and closed County Support Requests. Each Support Request shall be detailed in an Internet accessible Support Request report, in an exportable format agreed upon by County, and shall include the following information.

- Identification Number. An automatically assigned unique identification number, which shall be used to track, document and respond to inquiries relating to a specific Support Request;

- Date and Time. The date and time the Support Request was initiated, which shall be used to document and/or monitor overall response and resolution time;

- Person Initiating Service Request. The name, title, and telephone number of the person initiating the Support Request, who shall be the primary point of contact used for inquiries regarding the request, unless otherwise assigned by the County Project Manager;

- Call Taker. The name of Contractor personnel taking the call or first receiving an electronically submitted Support Request;

- Contractor Employee Currently Assigned. The name and title of the Contractor's employee currently managing the resolution;

- Location. Facility and/or physical location where the problem occurred;

- Problem Priority Level. The problem priority level as indicated by the reporting County personnel and as further defined in Section 4.2 (Support Request Service Levels) of this Exhibit E (Service Levels and Performance Standards);

- Reference Number. The County-assigned reference number, if applicable;

- Service Request Description. A detailed description of the problem or deficiency encountered or Support Requested;

- Attached Documentation. The identification or description of, and, if available, copies of, documentation submitted by County with the Support Request to clarify the request, including screen prints, logs, report samples, etc.;

- Service Request Type. The Support Request type (e.g., software change, deficiency, report request), as assigned by County which categorizes and specifies the type of request;

- Service Request Subtype. The Support Request subtype (e.g., specific function to be changed, specific function that is deficient, type of report change requested), as assigned by County, as a subcategory of the Support Request type defined in Section 4.2(a) (Support Requests) of this Exhibit E (Service Levels and Performance Standards);

- Resolution Description. The Contractor's analysis of the problem, and the proposed resolution (e.g., Update or other Enhancement);

- Resolution Activity. The Contractor's resolution activities and activity dates to monitor resolution time (e.g., description of calls to and from Contractor and County, referrals to Contractor's staff for correction or investigation, referrals to Third Party Software vendor, coordination of Update or Enhancement releases, validation of correction prior to release to County, etc.);

- Estimated Fix Date. The estimated date for Contractor to complete the Support Request;

- Correction Applied Date. The date Contractor applied the correction; and

- Resolution Status. The current status of the Support Request (e.g., open or closed).

(b) Contractor shall maintain a historical knowledge base of Service-related problems to identify patterns and facilitate timely resolution

4.2 SUPPORT REQUEST SERVICE LEVELS

Contractor shall Respond to and Resolve Support Requests as set forth below.

(a) Support Requests. County shall classify its requests for Error Corrections consistent with the descriptions below. Each such request shall be referred to herein as a "**Support Request**." County shall notify Contractor of Support Requests via telephone number, web-based SRTS, or other Contractor-provided mechanisms. All Contractor technical support personnel providing telephone support must do so in a manner such that the communication does not diminish County's ability to effectively utilize the Licensed Software and Hosting Services or negatively impact the satisfaction of the users with the Licensed Software and Hosting Services. Such impacts could arise from technology issues such as delays or jitter in telecommunication lines, or the failure of the Contractor

technical support personnel to provide support in standard American English with understandable accents or otherwise demonstrate sufficient language skills.

Support Request Classification	Description
Critical	Issue affecting entire system or single critical production function; System down or operating in materially degraded state; Potential patient care affected; Data integrity at risk; Material financial impact; Declared a Critical Support Request by the DHS CIO or designee; and/or Widespread access interruptions.
High	Primary workflow module failure that materially impairs system performance; and/or Data entry or access is materially impaired on a limited basis.
Medium	System is operating with minor issues that can be addressed with a work around.
Low	Request for assistance, information, or services that are routine in nature.

(b) Response Time Service Level. Response time shall be measured from the time when Contractor receives the Support Request until the time Contractor has Responded to the Support Request. "**Respond**" means that Contractor has engaged on the Support Request; is working continuously to diagnose the corresponding Errors, formulate a plan to address any such Errors, and execute that plan; and has notified the County user originating the Support Request that such support has begun in the manner requested by the user originating the Support Request (e.g., e-mail, phone) or, if a specific means of communication is not requested, using direct interactive (person to person) method of communication to achieve contact with such user (e.g., no email or automated voicemail).

Support Request Classification	Service Level Metric (Response Time)	Service Level Credits
Critical	100% fifteen (15) minutes measured from the time when Contractor receives the Support Request by telephone from County	Ten Thousand Dollars ($10,000.00) per incident either resulting in or subsequent to a Service Level Failure in a month
High	100% thirty (30) minutes measured	Five Thousand ($5,000.00) per incident either resulting in or subsequent to a

	from the time when Contractor receives the Support Request by telephone from County	Service Level Failure in a month

(c) Resolution Time Service Level. Resolution time shall be measured from the time when Contractor receives the Support Request until the time Contractor has Resolved the Support Request. "**Resolve**" means that, as to Errors, Contractor has provided County the corresponding Error Correction and County has confirmed such Error Correction.

The measurement of time to Resolve shall be suspended during such time as there is a failure by County to provide Contractor information deemed in writing by the Parties to be a Critical Path Item to the resolution at issue at the time of the Contractor request for such information was made to County. For purposes of this Section 4.2(c) (Resolution Time Service Level), a "**Critical Path Item**" is a significant action or item of information which Contractor cannot take or obtain without County's assistance and on which subsequent activities toward the resolution at issue are dependent. In the event Contractor claims a suspension of the measurement of time to Resolve under this Section, it shall notify County, by posting in SRTS the time and reason for such action at the time the suspension determination is made. The suspension of measurement of time to Resolve shall end upon communication by County to Contractor that the Critical Path Item has been completed.

The measurement of time to Resolve Support Requests requiring a change to the Licensed Software (e.g., Revision) will be calculated from the time the request is "opened" in SRTS until the time the request is identified as needing a change to the Licensed Software, provided Contractor has delivered a work-around that has been Approved by County prior to the suspension of the measurement of the time to Resolve.

Support Request Classification	Service Level Metric (Resolution Time)	Service Level Credits
Critical	100% four (4) hours	Ten Thousand ($10,000.00) per incident either resulting in or subsequent to a Service Level Failure in a month
High	100% eight (8) hours	Five Thousand ($5,000.00) per incident either resulting in or subsequent to a Service Level Failure in a month
Medium	95% three (3) business days	Two Thousand Five Hundred ($2,500.00) per incident either resulting in or subsequent to a Service Level Failure in a month
Low	95% five (5) business days	One Thousand ($1,000.00) per incident either resulting in or subsequent to a Service Level Failure in a month

Notwithstanding the foregoing, as to Third-Party Products, the measurement of time to Resolve shall be suspended during such times as Contractor can demonstrate that the: (i) the resolution of the Support Request required correction of an Error in a Third-Party Product; and (ii) the supplier of the Third-Party Product failed to meet the time specified in writing by Contractor for completion of correction of the Error in the Third-Party Product. In any circumstance in which suspension of the time to Resolve is requested under this Section 4.2(c) (Resolution Time Service Level), Contractor must provide a Corrective Action Plan. The determination of whether suspension of the measurement of time to Resolve relating to Third-Party Products is appropriate will be made by the Parties within thirty (30) days of a Resolution Time Service Level Failure attributed by Contractor a Third-Party Product as provided in this paragraph.

(d) Escalation. With respect to any Critical Support Request, until Resolved, Contractor shall escalate that Support Request within sixty (60) minutes of receipt to the appropriate Contractor support personnel (as designated by Contractor), including, as applicable, Contractor's SVP of Client Operations.

4.3 AVAILABILITY SERVICE LEVEL

The Licensed Software and Hosting Services shall be Available for the percentage of the time each month of the Term of the Agreement as set forth below

Service Level Metric	Service Level Credits
At a minimum, Proprietary and Confidential Availability for the Licensed Software provided by the Hosting Services in each calendar month of the Term of the Agreement. "**Availability**" means the actual uptime expressed as a percentage of the Scheduled Uptime for the Licensed Software and Hosting Services (i.e., Availability % = ((Scheduled Uptime – Downtime)/(Scheduled Uptime)) x 100%). "**Scheduled Uptime**" means twenty-four (24) hours each day, seven (7) days per week, excluding regular maintenance windows between the hours of 1:00 a.m. and 5:00 a.m. Pacific Time on Sundays, or as otherwise agreed in writing by the Parties. Notwithstanding anything herein, Contractor shall ensure that the Licensed Software and Hosting Services remain Available for Use during the foregoing maintenance windows to the extent reasonably practicable.	In the event Proprietary and Confidential Availability for the Hosting Services is not achieved, then the credits shall be incurred as follows: 5% of monthly Hosting Services fees for the first (1st) month, and 10% of monthly Hosting Services fees for the second (2nd) consecutive month, and 15% of monthly Hosting Services fees for the third (3rd) consecutive month and each consecutive month thereafter.

"**Downtime**" means the aggregate duration of Outages for the Licensed Software and Hosting Services during the applicable Scheduled Uptime during a calendar month. "**Outage**" means any time during which the Licensed Software and Hosting Services (or any function of the Licensed Software or Hosting Services) are not Available for Use during a calendar month, measured from the time the Outage actually occurred or, when the time the Outage actually occurred cannot be determined, from the earliest point in time that such Outage is or reasonably should be detected by Contractor. An Outage is an Error. The Outage shall end when the Licensed Software or Hosting Services (or the applicable function of the Licensed Software or Hosting Service) is Available for Use. "**Unplanned Downtime**" shall mean an Outage that is not the result of a regularly scheduled or other scheduled maintenance window. "**Available For Use**" shall mean the ability of the Licensed Software and Hosting Services to be utilized or accessed by County as contemplated under the Agreement, including conformance to the Specifications, and without material degradation of performance.	

4.4 [INTENTIONALLY DELETED]

4.5 <u>LICENSED SOFTWARE RESPONSE TIMES</u>

The Parties acknowledge that the quality of the Licensed Software Response Time of the Licensed Software and Hosting Services is a critical factor to the successful operation of the EHR System and County User satisfaction. Contractor warrants that the Licensed Software and Hosting Services together will be provided with function response times that are satisfactory to County Users of the EHR System. Licensed Software Response Time shall be determined to be unsatisfactory to the County Users if the County Project Director (or his or her designee) (a) presents documentation that reflects a negative view of the operation of the Licensed Software and Hosting Services that is or can reasonably be attributed to Licensed Software Response Time issues; or (b) determines that County Users' acceptance and/or use of the EHR System is or is highly likely to be adversely impacted by Licensed Software Response Times.

Upon notification of failure, Contractor shall provide a root cause analysis that includes an assessment of actions required to correct the Licensed Software Response Time failure, and take the actions necessary to implement the corrective actions as they relate to the Licensed Software or Hosting Services.

Contractor will provide Licensed Software and Hosting Services response time measurement reports as requested by County. In addition, Contractor will make available to County tools to enable County to monitor back-end system performance, including response time.

4.6 REPORTING SERVICE LEVEL

Contractor shall be responsible for measuring and monitoring Service Level performance and shall provide County with monthly reports showing Service Level performance during the reporting period at a level of detail sufficient to verify Contractor's compliance with the applicable Service Levels. All monthly reports due under this Agreement are due on the tenth (10th) Business Day of the month following the month for which such report relates; provided, however, that if the tenth (10th) is a weekend or County holiday, such reports shall be due on the first (1st) County Business Day thereafter. The reporting Service Level is set forth below.

Service Level Metric	Service Level Credits
All monthly reports submitted on or before tenth (10th) Business Day of each month	Five Thousand ($5,000.00) for the initial Service Level Failure, and Five Hundred ($500.00) for each additional Business Day late thereafter

4.7 DATA RETURN SERVICE LEVEL

Contractor shall return all County Data in accordance with the requirements of this Agreement not later than thirty (30) calendar days after County's request, or as otherwise agreed to in writing by the Parties. Contractor shall provide access to such County Data by a secure FTP site or provide a copy of County Data in a mutually agreed upon, commercially standard format.

Service Level Metric	Service Level Credits
All County Data returned within thirty (30) calendar days after County's request, or as otherwise agreed to in writing by the Parties	Ten Thousand ($10,000) per calendar day late

4.8 SERVICE LEVEL AUDITS

County or its designee will have the right to audit Contractor's measurement, monitoring, and reporting on all Service Levels, including providing County with access to the complete data used by Contractor to calculate its performance against the Service Levels and the measurement and monitoring procedures utilized by Contractor to generate such data for purposes of audit and verification.

4.9 MEETINGS

Contractor and County shall meet at least once a week, pending availability of both Parties, to review the status of open Support Requests, and discuss trends and issues relating to Support Requests and approaches to reducing the number of Support Requests as well as improving both County and Contractor responses to such Support Requests.

4.10 ADDITIONS, DELETIONS, AND MODIFICATIONS OF SERVICE LEVELS

Beginning in the Contract Year that is six (6) months after the Productive Use of the final Cluster and every three (3) years thereafter, unless otherwise agreed in writing by the Parties, the Parties will meet to discuss the addition, modification, or deletion of the Service Levels to account primarily for changes in technology and ongoing performance related issues. Any changes to Service Levels must be made in accordance with this Agreement.

Service Levels shall be added in accordance with the following:

(a) Where data exists for at least six (6) months from which measurements can be derived, County and Contractor shall review the measurement trends and the levels of quality that were attained during the measurement period and shall work together in good faith to mutually agree, and to establish the Service Level standard that Contractor will be required to meet; or

(b) Where no such data exists, the Parties shall attempt in good faith to mutually agree on a Service Level standard using industry standard measures applicable to the delivery of technology to health care providers or third-party vendor advisory services with experience in the health care industry.

5. SERVICE LEVEL FAILURES AND SERVICE LEVEL CREDITS

5.1 SERVICE LEVEL FAILURES

Failure to achieve any of the Service Levels described in Section 4 (Service Levels) of this Exhibit shall constitute a "**Service Level Failure**" and Contractor shall be liable for the Service Level Credits in the amounts set forth in Section 4 (Service Levels). Contractor shall not be responsible for any Service Level Failure caused by County or its agents. Contractor shall promptly notify County of any Service Level Failure.

5.2 SERVICE LEVEL CREDITS

(a) Credits. Upon the occurrence of any Service Level Failure, Contractor shall issue to County a credit in the amount set forth in Section 4 (Service Levels) ("**Service Level Credit**"). If more than one (1) Service Level Failure has occurred in a single month, the sum of the corresponding Service Level Credits shall be credited to County.

The total amount of Service Level Credits that Contractor will be obligated to pay to County, with respect to Service Level Failure(s), shall be reflected on the monthly

Service Level report to be provided in accordance with Section 4.6 (Reporting Service Level), in the month following the Service Level Failure(s) giving rise to such Service Level Credit(s). The Service Level Credit(s) amounts shall be subject to the earnback in any Contract Year as provided in Section 5.2(b) (Earnback) below. Notwithstanding the foregoing, the calculation of such Service Level Credit(s) shall be based on the credit amounts in effect.

(b) Earnback. Within thirty (30) calendar days after the last day of each Contract Year, Contractor shall provide a report (the "**Annual Service Level Performance Report**") to County that will include, with respect to each Service Level, a summary of Service Level performance by Service Level by month; identify by Service Level of any Service Level Credits accrued; and identify any Service Level changes and/or performance improvement actions taken. Service Level performance will also be reported by Contractor to County on a monthly basis as provided in Section 4.6 (Reporting Service Level).

If County verifies that during the preceding Contract Year:

(1) as to Service Levels that do not require "100% compliance" or delivery "all," or "every" time; Contractor achieved a yearly performance average in that Service Level that was greater than, or equal to, the Service Level in effect for such Service Level during the preceding Contract Year; or

(2) as to Service Levels that require "100% compliance" or delivery "all," or "every" time; Contractor has not had a Service Level Failure in two (2) or more months within the preceding Contract Year; then

Contractor shall be relieved from paying Service Level Credits accrued during the preceding Contract Year for the Service Level Failures for the specific Service Level(s) that meet the criteria in category (1) and/or (2), above, as applicable.

For each Contract Year, any Service Level Credits that are not earned back by Contractor as provided above will be credited to County on the second monthly invoice of each Contract Year. If no further monthly invoices are to be produced, Contractor will pay to County the monetary amount of the remaining Service Level Credits within fifteen (15) calendar days after the last day of the Term of the Agreement.

5.3 [INTENTIONALLY DELETED]

6. CORRECTIVE ACTION PLAN

In the event two (2) or more Critical Support Requests occur in any thirty (30) calendar day period during the Term of the Agreement, Contractor shall promptly investigate the root causes of such support issues and shall provide to County within five (5) Business Days of the occurrence of the second Critical Support Request an analysis of such root causes and a proposed corrective action plan for County's review, comment, and approval (the "**Corrective Action Plan**"). The Corrective Action Plan shall include, at a minimum: (a) a commitment by

Contractor to devote the appropriate time, skilled Contractor Personnel, systems support and equipment, and/or resources to remedy, and prevent any further occurrences of Critical Support Request issues; and (b) time frames for implementation of the Corrective Action Plan. There shall be no additional charge (other than those fees set forth in the Agreement) for Contractor's implementation of such Corrective Action Plan in the time frames and manner set forth in the Corrective Action Plan.

7. SERVICE OUTAGES

7.1 SCHEDULED OUTAGES

Contractor shall notify County of Scheduled Outages at least twenty-four (24) hours in advance, and such Scheduled Outages shall be scheduled between the hours of 1:00 a.m. and 5:00 a.m. Pacific Time on Sundays. Contractor requested Scheduled Outages shall occur no more frequently than once per calendar month. For avoidance of doubt, Scheduled Outages that fall within the above maintenance window timeframes are excluded from the Availability calculation. Contractor may request extensions of Scheduled Outages beyond the aforementioned hours and with Approval by County, which may not be unreasonably withheld or delayed.

7.2 UNSCHEDULED OUTAGES

Unscheduled Outages are caused by loss of connectivity, or by failure of a Contractor Service. In cases where a destination is not available, or unacceptable Hosting Service is reported, Contractor will attempt to determine the source of the Error and report its findings to County.

Unscheduled Outages and extensions of Scheduled Outages as described in Section 7.1 (Scheduled Outages), above, are not excluded from the Availability Service Level set forth above (i.e., an Outage, regardless of its cause, except due to the actions of County and its agents, shall not relieve Contractor of its obligation to achieve the Service Levels set forth herein).

7.3 CORRECTIVE ACTION

Immediately upon notice of an Outage, Contractor personnel shall:

- Confirm (or disconfirm) the Outage by a direct check of the facility;
- If confirmed, take such action as may restore the Service, or, if determined to be a telecommunications company problem, open a trouble ticket with the telecommunications company carrier;
- Notify the person designated by County by telephone or voicemail according to predefined procedures that an Outage has occurred, providing such details as may be available, including the trouble ticket number if appropriate and time of Outage;
- Work the Error until Resolution, escalating to management or to engineering as required; and

- Promptly notify County of final Resolution, along with any pertinent findings or action taken.

8. SECURITY BREACHES

In the event of an attack or threatened or suspected breach of security against the Hosting Services and/or Server impacting County system, Contractor will take whatever reasonable steps are necessary to halt such action, including taking the Hosting Services down. Upon identification of a security incident, Contractor will immediately contact the person designated by County to discuss the security incident. However, if time is critical, action may be required before the contact can be reached. Contractor's actions will include, as appropriate:

- Confirm the threat;
- Deny access from the source of the attack;
- Investigate the extent of the damage, if any;
- Back-up the affected systems and those suspected to be affected;
- Strengthen defenses everywhere, not just the suspected path that the attacker used;
- Contact the ISP where the threat or attack originated and/or law enforcement to work with Contractor's security team;
- Produce an Error report within twenty-four (24) hours detailing Contractor's findings; and
- Re-instate the denial of access after a set time period, but continue to monitor traffic from that source until risk of further attacks is deemed to be minimized.

Exhibit F (Business Associate Agreement)

to the

Electronic Health Records System and Services Agreement

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EXHIBIT F

BUSINESS ASSOCIATE AGREEMENT

Pursuant to the Electronic Health Records System and Services Agreement by and between the County of Los Angeles ("**Covered Entity**" or "**County**") and Cerner Corporation ("**Business Associate**" or "**Contractor**"), dated December 21, 2012, together with all Exhibits, Attachments, and Schedules thereto as may be amended from time to time ("**Agreement**"), Business Associate provides services ("**Services**") to Covered Entity and, in order to provide those Services, receives, has access to or creates Protected Health Information.

Covered Entity is subject to the Administrative Simplification requirements of the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 ("**HIPAA**"), and regulations promulgated thereunder, including the Standards for Privacy of Individually Identifiable Health Information ("**Privacy Regulations**") and the Health Insurance Reform: Security Standards ("**Security Regulations**") at 45 Code of Federal Regulations (C.F.R.) Parts 160 and 164 (together "**Privacy and Security Regulations**"). The Privacy and Security Regulations require Covered Entity to enter into a contract with Business Associate ("**Business Associate Agreement**") in order to mandate certain protections for the privacy and security of Protected Health Information, and those Regulations prohibit the disclosure to or use of Protected Health Information by Business Associate if such a contract is not in place;

Further, pursuant to the Health Information Technology for Economic and Clinical Health Act, Public Law 111-005 ("**HITECH Act**"), effective February 17, 2010, certain provisions of the HIPAA Privacy and Security Regulations apply to Business Associates in the same manner as they apply to Covered Entity, and such provisions must be incorporated into the Business Associate Agreement.

This Business Associate Agreement and the following provisions are intended to protect the privacy and provide for the security of Protected Health Information disclosed to or used by Business Associate in compliance with HIPAA's Privacy and Security Regulations and the HITECH Act, as they now exist or may hereafter be amended.

Therefore, the parties agree as follows:

1. **DEFINITIONS**

1.1 **"Breach"** has the same meaning as the term "breach" in 45 C.F.R. § 164.402.

1.2 "**Disclose**" and "**Disclosure**" mean, with respect to Protected Health Information, the release, transfer, provision of access to, or divulging in any other manner of Protected Health Information outside Business Associate's internal operations or to other than its employees.

1.3 "**Electronic Health Record**" has the same meaning as the term "electronic health record" in the HITECH Act, 42 U.S.C. Section 17921. Electronic Health Record means an electronic record of health-related information on an individual that is created, gathered, managed, and consulted by authorized health care clinicians and staff.

1.4 "**Electronic Media**" has the same meaning as the term "electronic media" in 45 C.F.R. §160.103. Electronic Media means (1) Electronic storage media including memory devices in computers (hard drives) and any removable/transportable digital memory medium, such as magnetic tape or disk, optical disk, or digital memory card; or (2) Transmission media used to exchange information already in electronic storage media. Transmission media include, for example, the internet (wide-open), extranet (using internet technology to link a business with information accessible only to collaborating parties), leased lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic storage media. Certain transmissions, including of paper, via facsimile, and of voice, via telephone, are not considered to be transmissions via electronic media, because the information being exchanged did not exist in electronic form before the transmission. The term "Electronic Media" draws no distinction between internal and external data at rest (that is, in storage) as well as during transmission.

1.5 "**Electronic Protected Health Information**" has the same meaning as the term "electronic protected health information" in 45 C.F.R. § 160.103. Electronic Protected Health Information means Protected Health Information that is (i) transmitted by electronic media; or (ii) maintained in electronic media.

1.6 **"Individual**" means the person who is the subject of Protected Health Information and shall include a person who qualifies as a personal representative in accordance with 45 C.F.R. § 164.502(g).

1.7 "**Minimum Necessary**" refers to the minimum necessary standard in 45 C.F.R. § 164.502 (b) as in effect or as amended.

1.8 "**Privacy Rule**" means the Standards for Privacy of Individually Identifiable Health Information at 45 Code of Federal Regulations (C.F.R.) Parts 160 and 164, also referred to as the Privacy Regulations.

1.9 "**Protected Health Information**" and "**PHI**" have the same meaning as the term "protected health information" in 45 C.F.R. § 160.103, limited to the information created or received by Business Associate from or on behalf of Covered Entity. Protected Health Information includes information that (i) relates to the past, present or future physical or mental health or condition of an Individual; the provision of health care to an Individual, or the past, present or future payment for the provision of health care to an Individual; (ii) identifies the Individual (or for which there is a reasonable basis for believing that the information can be used to identify the Individual); and (iii) is received by Business Associate from or on behalf of Covered Entity, or is created by Business Associate, or is made accessible to Business Associate by Covered Entity. Protected Health Information includes Electronic Protected Health Information.

1.10 "**Required By Law**" means a mandate contained in law that compels an entity to make a Use or Disclosure of Protected Health Information and that is enforceable in a court of law. Required By Law includes, but is not limited to, court orders and court-ordered warrants; subpoenas or summons issued by a court, grand jury, a governmental or tribal

inspector general, or any administrative body authorized to require the production of information; a civil or an authorized investigative demand; Medicare conditions of participation with respect to health care providers participating in the program; and statutes or regulations that require the production of information, including statutes or regulations that require such information if payment is sought under a government program providing benefits.

1.11 "**Security Incident**" means the attempted or successful unauthorized access, Use, Disclosure, modification or destruction of information in, or interference with system operations of, an Information System, which contains Electronic Protected Health Information. However, Security Incident does not include attempts to access an Information System when those attempts are not reasonably considered by Business Associate to constitute an actual threat to the Information System.

1.12 "**Security Rule**" means the Security Standards for the Protection of Electronic Protected Health Information also referred to as the Security Regulations at 45 Code of Federal Regulations (C.F.R.) Part 160 and 164.

1.13 "**Services**" has the same meaning as in the Agreement.

1.14 "**Unsecured Protected Health Information**" has the same meaning as the term "unsecured protected health information" in 45 C.F.R. § 164.402.

1.15 "**Use**" or "**Uses**" mean, with respect to Protected Health Information, the sharing, employment, application, utilization, examination or analysis of such Information within Business Associate's internal operations.

Terms used, but not otherwise defined, in this Business Associate Agreement or the Agreement shall have the same meaning as those terms in the Privacy and Security Regulations and the HITECH Act.

2. OBLIGATIONS OF BUSINESS ASSOCIATE

2.1 **Permitted Uses and Disclosures of Protected Health Information**. Business Associate:

2.1(a) shall Use and Disclose Protected Health Information only as necessary to perform the Services, and as provided in Sections 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 4.3 and 5.2 of this Business Associate Agreement;

2.1(b) shall Disclose Protected Health Information to Covered Entity upon request;

2.1(c) may, as necessary for the proper management and administration of its business or to carry out its legal responsibilities:

(i) Use Protected Health Information; and

(ii) Disclose Protected Health Information if the Disclosure is Required by Law, or to its agents and/or subcontractors with respect to which the procedures outlined in Section 5.2 of this Business Associate Agreement have been complied.

Business Associate shall not Use or Disclose Protected Health Information for any other purpose or in any manner that would constitute a violation of the Privacy Regulations or the HITECH Act if so Used or Disclosed by Covered Entity.

2.2 **Prohibited Uses and Disclosures of Protected Health Information**. Business Associate:

2.2(a) shall not Use or Disclose Protected Health Information for fundraising or marketing purposes.

2.2(b) shall not disclose Protected Health Information to a health plan for payment or health care operations purposes if the Individual has requested this special restriction and has paid out of pocket in full for the health care item or service to which the Protected Health Information solely relates.

2.2(c) shall not directly or indirectly receive payment in exchange for Protected Health Information, except with the prior written consent of Covered Entity and as permitted by the HITECH Act. This prohibition shall not affect payment by Covered Entity to Business Associate. Covered Entity shall not provide such written consent except upon express approval of the departmental privacy officer and only to the extent permitted by law, including HIPAA and the HITECH Act.

2.3 **Adequate Safeguards for Protected Health Information**. Business Associate:

2.3(a) shall implement and maintain appropriate safeguards to prevent the Use or Disclosure of Protected Health Information in any manner other than as permitted by this Business Associate Agreement. Business Associate agrees to limit the Use and Disclosure of Protected Health Information to the Minimum Necessary in accordance with the Privacy and Security Regulation's minimum necessary standard as in effect or as amended.

2.3(b) as to Electronic Protected Health Information, shall implement and maintain administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of Electronic Protected Health Information. Effective February 17, 2010, said safeguards shall be in accordance with 45 C.F.R. §§ 164.308, 164.310, and 164.312 and shall comply with the Security Rule's policies and procedure and documentation requirements.

2.4 **Reporting Non-Permitted Use or Disclosure and Security Incidents and Breaches of Unsecured Protected Health Information**. Business Associate:

2.4(a) shall report to Covered Entity each Use or Disclosure of Protected Health Information that is made by Business Associate, its employees, representatives, agents, subcontractors, or other parties under Business Associate's control with Access to Protected Health Information, but which is not specifically permitted by this Business Associate Agreement or otherwise Required By law.

2.4(b) shall report to Covered Entity each Security Incident of which Business Associate becomes aware.

2.4(c) shall notify Covered Entity of each Breach by Business Associate, its employees, representatives, agents or subcontractors of Unsecured Protected Health Information that is known to Business Associate or, by exercising reasonable diligence, would have been known to Business Associate. Business Associate shall be deemed to have knowledge of a Breach of Unsecured Protected Health Information if the Breach is known, or by exercising reasonable diligence would have been known, to any person, other than the person committing the Breach, who is an employee, officer, or other agent of the Business Associate as determined in accordance with the federal common law of agency.

2.4.1 **Immediate Telephonic Report**. Except as provided in Section 2.4.3, notification shall be made immediately upon discovery of the non-permitted Use or Disclosure of Protected Health Information, Security Incident or Breach of Unsecured Protected Health Information by telephone call to (562) 940-3335.

2.4.2 **Written Report**. Except as provided in Section 2.4.3, the initial telephonic notification shall be followed by written notification made without unreasonable delay and in no event later than three (3) business days from the date of discovery of the non-permitted Use or Disclosure of Protected Health Information, Security Incident, or Breach by the Business Associate to the Chief Privacy Officer at:

Chief Privacy Officer

Kenneth Hahn Hall of Administration

500 West Temple Street

Suite 525

Los Angeles, California 90012

HIPAA@auditor.lacounty.gov

(213) 974-2166

2.4.2(a) The notification required by Section 2.4 shall include, to the extent possible, the identification of each Individual whose Unsecured Protected Health Information has been, or is reasonably believed by the Business Associate to have been, accessed, acquired, Used, or Disclosed; and

2.4.2(b) the notification required by Section 2.4 shall include, to the extent possible, all information required to provide notification to the Individual under 45 C.F.R. § 164.404(c), including:

(i) A brief description of what happened, including the date of the Breach and the date of the discovery of the Breach, if known;

(ii) A description of the types of Unsecured Protected Health Information that were involved in the Breach (such as whether full name, social security number, date of birth, home address, account number, diagnosis, disability code, or other types of information were involved);

(iii) Any other details necessary to conduct an assessment of whether there is a risk of harm to the Individual;

(iv) Any steps Business Associate believes that the Individual could take to protect him or herself from potential harm resulting from the Breach;

(v) A brief description of what Business Associate is doing to investigate the Breach, to mitigate harm to the Individual, and to protect against any further Breaches; and

(vi) The name and contact information for the person most knowledgeable regarding the facts and circumstances of the Breach.;

If Business Associate is not able to provide the information specified in Section 2.4.2 (a) or (b) at the time of the notification required by Section 2.4.2, Business Associate shall provide such information promptly thereafter as such information becomes available.

2.4.3 **Request for Delay by Law Enforcement**. Business Associate may delay the notification required by Section 2.4 if a law enforcement official states to Business Associate that notification would impede a criminal investigation or cause damage to national security. If the law enforcement official's statement is in writing and specifies the time for which a delay is required, Business Associate shall delay notification, notice, or posting for the time period specified by the official; if the statement is made orally, Business Associate shall document the statement, including the identity of the official making the

statement, and delay the notification, notice, or posting temporarily and no longer than 30 days from the date of the oral statement, unless a written statement as described in this section is submitted during that time.

2.5 **Mitigation of Harmful Effect**. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a Use or Disclosure of Protected Health Information by Business Associate in violation of the requirements of this Business Associate Agreement.

2.6 **Breach Notification**. Business Associate shall reimburse Covered Entity for any and all reasonable costs, to the extent required by law, incurred by Covered Entity providing notification to the individual under 45 C.F.R. 164.404(c) and in compliance with Covered Entity's obligations under Subpart D, Notification in the Case of a Breach of Unsecured Protected Health Information, of the Privacy and Security Regulations, internet posting, and/or media publication, and costs of mitigating the harm (which may include the costs of obtaining credit monitoring services and identity theft insurance) for affected individuals whose Protected Health Information has or may have been compromised as a result of Business Associate's Breach of Unsecured Protected Health Information.

2.7 **Availability of Internal Practices, Books and Records to Government Agencies**. Business Associate agrees to make its internal practices, books and records relating to the Use and Disclosure of Protected Health Information available to the Secretary of the federal Department of Health and Human Services for purposes of determining Covered Entity's compliance with the Privacy and Security Regulations. Business Associate shall immediately notify Covered Entity of any requests made by the Secretary and provide Covered Entity with copies of any documents produced in response to such request.

2.8 **Access to Protected Health Information**. Business Associate shall, to the extent Covered Entity determines that any Protected Health Information constitutes a "designated record set" as defined by 45 C.F.R. § 164.501, make the Protected Health Information specified by Covered Entity available to the Individual(s) identified by Covered Entity as being entitled to access and copy that Protected Health Information. Business Associate shall provide such access for inspection of that Protected Health Information within twenty (20) days after receipt of request from Covered Entity, or such longer time (not to exceed ten (10) additional days) as Covered Entity may authorize in writing. Business Associate shall provide copies of that Protected Health Information within twenty (20) days after receipt of request from Covered Entity, or such longer time (not to exceed ten (10) additional days) as Covered Entity may authorize in writing. If Business Associate maintains an Electronic Health Record, Business Associate shall provide such information in electronic format to enable Covered Entity to fulfill its obligations under the HITECH Act.

2.9 **Accounting of Disclosures**. Business Associate shall, to the extent Covered Entity determines that any Protected Health Information constitutes a "designated record set" as defined by 45 C.F.R. § 164.501, make any amendments to Protected Health Information that are requested by Covered Entity. Business Associate shall make such amendment within twenty (20) days after receipt of request from Covered Entity in

order for Covered Entity to meet the requirements under 45 C.F.R. § 164.526, or such longer time (not to exceed ten (10) additional days) as Covered Entity may authorize in writing.

2.10 **Amendment of Protected Health Information**. Upon Covered Entity's request, Business Associate shall provide to Covered Entity an accounting of each Disclosure of Protected Health Information made by Business Associate or its employees, agents, representatives, or subcontractors in order to permit Covered Entity to respond to a request by an Individual for an accounting of Disclosures of Protected Health Information in accordance with 45 C.F.R. § 164.528 and/or the HITECH Act which requires an Accounting of Disclosures of Protected Health Information maintained in an Electronic Health Record for treatment, payment, and health care operations.

Any accounting provided by Business Associate under this Section 2.10 shall include: (a) the date of the Disclosure; (b) the name, and address if known, of the entity or person who received the Protected Health Information; (c) a brief description of the Protected Health Information disclosed; and (d) a brief statement of the purpose of the Disclosure. For each Disclosure that could require an accounting under this Section 2.10, Business Associate shall document the information specified in (a) through (d), above, and shall securely maintain the information for six (6) years from the date of the Disclosure. Business Associate shall provide to Covered Entity, within ten (10) business days after receipt of request from Covered Entity, information collected in accordance with this Section 2.10 to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 C.F.R. § 164.528. If Business Associate maintains an Electronic Health Record, Business Associate shall provide such information in electronic format to enable Covered Entity to fulfill its obligations under the HITECH Act.

2.11 **Indemnification**. Business Associate shall indemnify, defend, and hold harmless Covered Entity, including its elected and appointed officers, employees, and agents, from and against any and all liability, including but not limited to demands, claims, actions, fees, costs, penalties and fines (including regulatory penalties and/or fines), and expenses (including attorney and expert witness fees) to the extent arising from or connected with Business Associate's acts and/or omissions arising from and/or relating to this Business Associate Agreement; Business Associate's obligations under this provision extend to compliance and/or enforcement actions of Secretary of the federal Department of Health and Human Services and/or Office for Civil Rights.

3. OBLIGATION OF COVERED ENTITY

Covered Entity shall notify Business Associate of any current or future restrictions or limitations on the use of Protected Health Information that would affect Business Associate's performance of the Services, and Business Associate shall thereafter restrict or limit its own uses and disclosures accordingly.

4. TERM AND TERMINATION

4.1 **Term**. The term of this Business Associate Agreement shall be the same as the term of the Services Agreement. Business Associate's obligations under Sections 4.3, and with respect to any Protected Health Information under Section 4.3(b), Sections 2.1 (as modified by Section 4.2), 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 4.3 and 5.2 shall survive the termination or expiration of this Agreement, to the extent that return or destruction of Protected Health Information is not feasible.

4.2 **Termination for Cause**. In addition to and notwithstanding the termination provisions set forth in the Agreement, upon either party's knowledge of a material breach of this Business Associate Agreement by the other party, the party with knowledge of the other party's breach shall either:

4.2(a) Provide an opportunity for the breaching party to cure the breach or end the violation and terminate the Agreement if the breaching party does not cure the breach or end the violation within the time specified by the non-breaching party;

4.2(b) Immediately terminate the Agreement if a party has breached a material term of this Business Associate Agreement and cure is not possible; or

4.2(c) If neither termination nor cure is feasible, report the violation to the Secretary of the federal Department of Health and Human Services.

4.3 **Disposition of Protected Health Information upon Termination or Expiration**.

4.3(a) Except as provided in paragraph (b) of this Section 4.3, upon termination for any reason or expiration of the Agreement, Business Associate shall return or destroy all Protected Health Information, received from Covered Entity or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the Protected Health Information.

4.3(b) In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible. If return or destruction is infeasible, Business Associate shall extend the protections of this Business Associate Agreement to such Protected Health Information and limit further Uses and Disclosures of such Protected Health Information to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such Protected Health Information.

5. MISCELLANEOUS

5.1 **No Third Party Beneficiaries**. Nothing in this Business Associate Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

5.2 **Use of Subcontractors and Agents**. Business Associate shall require each of its agents and subcontractors that receive Protected Health Information from Business Associate, or create Protected Health Information for Business Associate, on behalf of Covered Entity, to agree to the same restrictions that apply to Business Associate with respect to Protected Health Information.

5.3 **Relationship to Services Agreement Provisions**. In the event that a provision of this Business Associate Agreement is contrary to a provision of the Agreement, the provision of this Business Associate Agreement shall control. Otherwise, this Business Associate Agreement shall be construed under, and in accordance with, the terms of the Agreement.

5.4 **Regulatory References**. A reference in this Business Associate Agreement to a section in the Privacy or Security Regulations means the section as in effect or as amended.

5.5 **Interpretation**. Any ambiguity in this Business Associate Agreement shall be resolved in favor of a meaning that permits Covered Entity to comply with the Privacy and Security Regulations.

5.6 **Amendment**. The parties agree to amend this Business Associate Agreement in accordance with the body of this Agreement, from time to time as is necessary for Covered Entity to comply with the requirements of the Privacy and Security Regulations and other privacy laws governing Protected Health Information.

Exhibit G (Glossary)

to the

Electronic Health Records System and Services Agreement

EXHIBIT G

GLOSSARY

This Exhibit G (Glossary) is attached to and incorporated by reference in that certain Electronic Health Records System and Services Agreement by and between the County of Los Angeles and Cerner Corporation dated for reference purposes as of the Effective Date. Whenever used in the Exhibits, Attachments, or Schedules to the Agreement, the words and phrases listed below shall have the meanings given in this Exhibit G (Glossary). Capitalized terms not otherwise defined in this Exhibit G (Glossary) shall have the meanings ascribed to them in the Agreement or in other Exhibits, Attachments, or Schedules. In the event there is a conflict between how a term is defined in this Exhibit G (Glossary) and any other portion of the Agreement, the order of precedence for understanding the meaning of that term, shall be as follows: (a) how that term is defined in the Agreement; (b) how that term is defined in this Exhibit G (Glossary); and (c) how that term is defined in the other Exhibits, Attachments, and Schedules to the Agreement. Unless otherwise specified herein, all references in this Exhibit G (Glossary) to Sections shall refer to the respective Sections of this Agreement as specified in the main body of the Agreement (rather than the Exhibits, Attachments, or Schedules thereto).

1. 24X7X365

   "**24x7x365**" means 24 hours a day, 7 days a week, 365 days a year.

2. ACCEPTANCE

   "**Acceptance**" shall mean the completion of the Acceptance Certificate by County's Project Director as described in Section 9.13 (Approval Of Key Deliverables).

3. ACCEPTANCE CERTIFICATE

   "**Acceptance Certificate**" shall have the meaning specified in Section 9.13 (Approval of Key Deliverables).

4. ACCEPTANCE CRITERIA

   "**Acceptance Criteria**" shall have the meaning specified in Section 12.1 (Acceptance Criteria).

5. ACCEPTANCE TESTS

   "**Acceptance Tests**" shall have the meaning specified in Section 12.2 (Acceptance Tests).

6. ACCESS CONTROL LIST OR ACL

   "**Access Control List**" or "**ACL**" shall have the meaning specified in Section 3.3(b) (Physical Security Environment) of Exhibit N.1 (Hosting Services).

7. ADDITIONAL TERMS

   "**Additional Terms**" shall have the meaning specified in Section 32.5 (Entire Agreement).

8. ADVANCING CONVERSION EXCELLENCE TEAM OR ACE TEAM

"**Advancing Conversion Excellence Team**" or "**ACE Team**" shall have the meaning specified in task 3.3 (Develop Go-Live Event Staffing and Support Model) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

9. AFFILIATED USER OR AFFILIATE USERS

"**Affiliated User**" or "**Affiliate Users**" shall have the meaning specified in Section 2.2 (County).

10. AGREEMENT

"**Agreement**" shall have the meaning specified in the Preamble to the Agreement.

11. AMENDMENT

"**Amendment**" shall have the meaning specified in Section 13.4 (Amendments).

12. AMS DELIVERY MODEL

"**AMS Delivery Model**" shall have the meaning specified in task 2.1 (Develop and Maintain Production Support Plan) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

13. AMS SERVICES

"**AMS Services**" shall have the meaning described in Section 9.7 (Support Services).

14. APPROVAL

"**Approve**," "**Approval**," or "**Approved**" shall mean the written acceptance or other required approval by DHS's Chief Information Officer (or his or her designee) or the County Project Director (or his or her designee) of a specifically identified Deliverable or any other item requiring County approval. "**Approval**" as it relates to a Key Deliverables shall mean Approval by County of the Acceptance Certificate for that Deliverable.

15. APPROVED PHYSICAL GROWTH EVENT

"**Approved Physical Growth Event**" shall have the meaning specified in Section 2.3 (Approved Physical Growth Event) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

16. APPROVED REASSIGNMENTS SECTION 10.1.1

"**Approved Reassignments Section 10.1.1**" shall have the meaning specified in Section 10.1.1 (Project Director).

17. APPROVED REASSIGNMENTS SECTION 10.1.2

"**Approved Reassignments Section 10.1.2**" shall have the meaning specified in Section 10.1.2 (Contractor Project Manager).

18. ARRA

"**ARRA**" shall have the meaning specified in Recital E.

19. ATTACHMENT

"**Attachment**" shall have the meaning specified in the Preamble to the Agreement.

20. AUTHORIZED BILLING AND PAYMENT MECHANISMS

"**Authorized Billing and Payment Mechanisms**" shall have the meaning specified in Section 1 (Introduction) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

21. AUTHORIZED MODIFICATIONS TO MILESTONE PAYMENTS

"**Authorized Modifications to Milestone Payments**" shall have the meaning specified in Section 2.1 (Milestone Payments) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

22. AVAILABILITY

"**Availability**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

23. AVAILABLE FOR USE

"**Available for Use**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

24. BAA OR BUSINESS ASSOCIATE AGREEMENT

"**Business Associate Agreement**" or "**BAA**" shall have the meaning specified in Section 2.1(i)(ii) (Contractor; Subcontracting). The current BAA is attached as Exhibit F (Business Associate Agreement).

25. BACKFILL STAFFING PROCEDURES

"**Backfill Staffing Procedures**" shall have the meaning specified in task 3.2 (Develop Backfill Procedures) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

26. BANKRUPTCY CODE

"**Bankruptcy Code**" shall mean the United States Bankruptcy Code (15 United States Code ("**U.S.C.**") §101 et seq.).

27. BASE YEAR INDEX

"**Base Year Index**" shall have the meaning specified in Section 14.10 (Cost of Living Adjustment).

28. BASELINE USE METRICS

"**Baseline Use Metrics**" shall have the meaning specified in Section 2.2.1 (Use Reconciliation) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

29. BENEFITS PRESENTATION

"**Benefits Presentation**" shall have the meaning specified in task 3.1 (Conduct System Review Session) of Exhibits A.4 through A.17 of the Agreement.

30. BEST PRACTICES

"**Best Practices**" means those proven methods and techniques used by Contractor (regardless of whether such Best Practices are Contractor intellectual property) to deliver services similar to the Services across multiple clients of Contractor, that have shown results superior than those achieved by other alternative means, including as such Best Practices are modified or replaced with improved methods and techniques from time to time during the Term of this Agreement.

31. BOARD

"**Board**" shall have the meaning specified in Recital B.

32. BUILD AUDIT REPORT

"**Build Audit Report**" shall have the meaning specified in task 6.1 (System Validation Session) of Exhibits A.4 through A.17 of the Agreement.

33. BUSINESS CONTINUITY PLAN

"**Business Continuity Plan**" shall have the meaning specified in Section 22 (Disaster Recovery/Business Continuity).

34. BUSINESS DAY(S)

"**Business Day(s)**" whether singular or plural, shall mean Monday through Friday, excluding County observed holidays, unless stated otherwise.

35. BUSINESS OBJECTIVES

"**Business Objectives**" shall have the meaning specified in Recital D.

36. CCHIT

"**CCHIT**" shall have the meaning specified in Section 29.3 (Termination for Regulatory Non-Compliance).

37. CERNER COMMAND LANGUAGE OR CCL

"**Cerner Command Language**" or "**CCL**" shall have the meaning specified in task 10.1 (Conduct Dashboards, Custom Reporting, and Data Analytics Training) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

38. CERNER LEARNING MANAGER

"**Cerner Learning Manager**" shall have the meaning specified in task 4.2 (Implement and Deploy the LearningLIVE Environment) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

39. CERTIFICATE

"**Certificate**" shall have the meaning specified in Section 25.2 (Evidence of Coverage and Notice).

40. CERTIFICATION OF PERFORMANCE VERIFICATION AND FINAL ACCEPTANCE

"**Certification of Performance Verification and Final Acceptance**" shall have the meaning described in Section 12.5.3 (Final Acceptance).

41. CERTIFIED EHR TECHNOLOGY

"**Certified EHR Technology**" shall have the meaning ascribed to such term under the ARRA and its implementing rules and regulations.

42. C.F.R.

"**C.F.R.**" shall have the meaning specified in Section 19.10 (Compliance With Federal and State Confidentiality Requirements).

43. CHANGE NOTICE

"**Change Notice**" shall have the meaning specified in Section 13.2 (Change Notices).

44. CHANGE OF CONTROL

"**Change of Control**" shall have the meaning specified in Section 32.17.1(b) (Assignment by Contractor).

45. CHANGE ORDER

"**Change Order**" shall mean the terms of any Optional Work agreed to by County and Contractor applicable to the provision of New Software, Third-Party Products and/or Professional Services by Contractor, as specified in Section 9.8 (Optional Work).

46. CHARGE SERVICES INITIATION SESSION

"**Charge Services Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Charge Services Workgroup) of Exhibit A.5 (Charge Services Statement of Work) of the Agreement.

47. CLASS 1 WORK PRODUCT

"**Class 1 Work Product**" shall have the meaning specified in Section 18.1(1) (Work Product and Background Intellectual Property).

48. CLASS 2 WORK PRODUCT

"**Class 2 Work Product**" shall have the meaning specified in section 18.1(2) (Work Product and Background Intellectual Property).

49. CLINICAL AND BUSINESS PROCESS ANALYSIS TRAINING

"**Clinical and Business Process Analysis Training**" shall have the meaning specified in task 12.7 (Conduct Clinical and Business Process Analysis Training) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

50. CLINICAL DATA REPOSITORY

"**Clinical Data Repository**" shall have the meaning specified in task 3.1 (Document Functional and Technical Specifications for Interfaces) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

51. CLINICAL DATA REPOSITORY AND REPORTING INITIATION SESSION

"**Clinical Data Repository and Reporting Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Clinical Data Repository and Reporting Workgroup) of Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work) of the Agreement.

52. CLINICAL DOCUMENTATION AND RESULTS INITIATION SESSION

"**Clinical Documentation and Results Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Clinical Documentation and Results Workgroup) of Exhibit A.7 (Clinical Documentation and Results Statement of Work) of the Agreement.

53. CLINICAL DOCUMENTATION AND RESULTS WORKFLOW WORKSHOP

"**Clinical Documentation and Results Workflow Workshop**" shall have the meaning specified in task 4.4 (Conduct Clinical Documentation Workflow Workshop) of Exhibit A.7 (Clinical Documentation and Results Statement of Work) of the Agreement.

54. CLUSTER OR CLUSTERS

"**Cluster**" or "**Clusters**" shall mean individually each grouping, and collectively all of the groupings, of County facilities as identified in Exhibit U (Clusters).

55. CMS

"**CMS**" shall have the meaning specified in Recital E.

56. COMPLETE BUILD

"**Complete Build**" shall have the meaning specified in task 7 (Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing) of Exhibits A.4 through A.17 of the Agreement.

57. COMPLETE EHR

"**Complete EHR**" shall have the meaning ascribed to such term under the ARRA and its implementing rules and regulations.

58. COMPLIANCE TESTING

"**Compliance Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

59. COMPUTER ROOM AIR CONDITIONERS OR CRAC

"**Computer Room Air Conditioners**" or "**CRAC**" or shall have the meaning specified in Section 3.2(b) (Physical Environment) of Exhibit N.1 (Hosting Services).

60. CONFIDENTIAL INFORMATION

"**Confidential Information**" shall have the meaning specified in Section 19.2 (Confidential Information Defined).

61. CONFIDENTIALITY AND ASSIGNMENT AGREEMENT

"**Confidentiality and Assignment Agreement**" shall have the meaning specified in Section 2.1(i)(ii) (Contractor; Subcontracting). The current Confidentiality and Assignment Agreement is attached as Exhibit R (Confidentiality and Assignment Agreement).

62. CONFIGURATION AND TECHNOLOGY CHANGE CONTROL BOARD

"**Configuration and Technology Change Control Board**" shall have the meaning specified in task 3.12 (Provide Technology Change Management) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

63. CONFIGURATION AND TECHNOLOGY CHANGE MANAGEMENT PLAN

"**Configuration and Technology Change Management Plan**" shall have the meaning specified in task 4.7 (Develop Configuration and Technology Change Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

64. CONFIGURATION MANAGEMENT REPORTS

"**Configuration Management Reports**" shall have the meaning specified in task 3.13 (Provide Configuration Management) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

65. CONFIGURATION WARRANTY PERIOD

"**Configuration Warranty Period**" shall have the meaning specified in Section 17.1.9 (System Configuration Warranty.

66. CONTINUITY COMMITMENT

"**Continuity Commitment**" has the meaning specified in Exhibit J (Contractor Key Employees) of the Agreement.

67. CONTRACTOR

"**Contractor**" shall have the meaning specified in the Preamble to the Agreement.

68. CONTRACTOR CHARGE SERVICES DELIVERY CONSULTANT

"**Contractor Charge Services Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.5 (Charge Services Statement of Work) of the Agreement.

69. CONTRACTOR CLINICAL DATA REPOSITORY AND REPORTING DELIVERY CONSULTANT

"**Contractor Clinical Data Repository and Reporting Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.17 (Clinical Data Repository and Reporting Statement of Work) of the Agreement.

70. CONTRACTOR CLINICAL DOCUMENTATION AND RESULTS DELIVERY CONSULTANT

"**Contractor Clinical Documentation and Results Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.7 (Clinical Documentation and Results Statement of Work) of the Agreement.

71. CONTRACTOR DATA CONVERSION DELIVERY CONSULTANT

"**Contractor Data Conversion Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

72. CONTRACTOR DELIVERY CONSULTANT

"**Contractor Delivery Consultant**" shall have the meaning specified in each of the Statements of Work of the Agreement.

73. CONTRACTOR EHR SYSTEM TESTING DELIVERY CONSULTANT

"**Contractor EHR System Testing Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

74. CONTRACTOR EMERGENCY DEPARTMENT DELIVERY CONSULTANT

"**Contractor Emergency Department Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.14 (Emergency Department Statement of Work) of the Agreement.

75. CONTRACTOR INTENSIVE CARE UNIT DELIVERY CONSULTANT

"**Contractor Intensive Care Unit Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.13 (Intensive Care Unit Statement of Work) of the Agreement.

76. CONTRACTOR INTERFACES DELIVERY CONSULTANT

"**Contractor Interfaces Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

77. CONTRACTOR KEY EMPLOYEES

"**Contractor Key Employees**" means the Contractor Project Director and any other individuals employed in the positions identified in Exhibit J (Contractor Key Employees), collectively.

78. CONTRACTOR LABORATORY DELIVERY CONSULTANT

"**Contractor Laboratory Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.10 (Laboratory Statement of Work) of the Agreement.

79. CONTRACTOR LEAD PARTNER

"**Contractor Lead Partner**" shall have the meaning described in Section 30.2 (Critical Path Escalation Issues).

80. CONTRACTOR MEDICAL RECORDS DELIVERY CONSULTANT

"**Contractor Medical Records Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.16 (Medical Records Statement of Work) of the Agreement.

81. CONTRACTOR OPERATING ROOM AND ANESTHESIOLOGY DELIVERY CONSULTANT

"**Contractor Operating Room and Anesthesiology Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.12 (OR and Anesthesiology Statement of Work) of the Agreement.

82. CONTRACTOR ORDER MANAGEMENT, CPOE, AND DECISION SUPPORT DELIVERY CONSULTANT

"**Contractor Order Management, CPOE, and Decision Support Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.8 (Order Management, CPOE and Decision Support Statement of Work) of the Agreement.

83. CONTRACTOR PERSONNEL

"**Contractor Personnel**" shall mean all of Contractor's employees, agents, and subcontractors who perform services related to the performance of Contractor's obligations under this Agreement.

84. CONTRACTOR PHARMACY AND MEDICATION MANAGEMENT DELIVERY CONSULTANT

"**Contractor Pharmacy and Medication Management Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.11 (Pharmacy and Medication Management Statement of Work) of the Agreement.

85. CONTRACTOR PRIMARY DATA CENTER

"**Contractor Primary Data Center**" shall mean the principal data center facility in which the Hosting Environment shall operate throughout the Term of the Agreement.

86. CONTRACTOR PROFESSIONAL SERVICES FEE PROJECTION

"**Contractor Professional Services Fee Projection**" shall have the meaning specified in Section 14.7.2(b) (Time and Materials).

87. CONTRACTOR PROJECT DIRECTOR

"**Contractor Project Director**" shall have the meaning specified in Section 10.1.1 (Project Director).

88. CONTRACTOR PROJECT MANAGER

"**Contractor Project Manager**" shall have the meaning specified in Section 10.1.2 (Contractor Project Manager).

89. CONTRACTOR RADIOLOGY DELIVERY CONSULTANT

"**Contractor Radiology Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.9 (Radiology Statement of Work) of the Agreement.

90. CONTRACTOR REGISTRATION AND EMPI DELIVERY CONSULTANT

"**Contractor Registration and EMPI Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.4 (Registration and EMPI Statement of Work) of the Agreement.

91. CONTRACTOR REHABILITATION DELIVERY CONSULTANT

"**Contractor Rehabilitation Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.15 (Rehabilitation Statement of Work) of the Agreement.

92. CONTRACTOR SCHEDULING DELIVERY CONSULTANT

"**Contractor Scheduling Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.6 (Scheduling Statement of Work) of the Agreement.

93. CONTRACTOR SECONDARY DATA CENTER

"**Contractor Secondary Data Center**" shall mean a fail-over recovery data center facility, in which the Hosting Environment shall operate and provide business continuity Services throughout the Term of the Agreement, in the event of Contractor's inability to provide the Hosting Services from Contractor Primary Data Center.

94. CONTRACTOR SECURITY ISSUES AND INCIDENTS NOTIFICATION PROCESSES

"**Contractor Security Issues and Incidents Notification Processes**" shall have the meaning specified in task 2.3 (Define Contractor Process for Notifying County of Security Issues) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

95. CONTRACTOR'S QUALITY SYSTEM OR CQS

"**Contractor's Quality System**" or "**CQS**" shall have the meaning specified in Section 15.11(a)(ii) (Internal Audit) of the Agreement.

96. CONTRACT SUM

"**Contract Sum**" shall mean the total monetary amount payable by County to Contractor hereunder, as specified in Section 14.1 (Maximum Contract Sum).

97. CONTRACTOR SUPPORT SERVICES, MAINTENANCE AND OPERATIONS DELIVERY CONSULTANT

"**Contractor Support Services, Maintenance and Operations Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.24 (Support Services, Maintenance and Operations Statement of Work) of the Agreement.

98. CONTRACTOR TRAINING AND KNOWLEDGE TRANSFER DELIVERY CONSULTANT

"**Contractor Training and Knowledge Transfer Delivery Consultant**" shall have the meaning specified in Section 4.1 (Contractor Delivery Consultant Responsibilities) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

99. CONTRACT YEAR

"**Contract Year"** shall mean the twelve (12) month period commencing on the Effective Date, and each subsequent twelve (12) month period thereafter during the Term. For the purposes of determining Contract Years, the period from December 21, 2012 through December 31, 2013 shall be deemed to be Contract Year 1.

100. COO

"**COO**" shall have the meaning specified in Section 31.2 (Executive Team Participation).

101. COOKIE

"**Cookie**" shall have the meaning specified in Section 1.4 (Use of Cookies on the Service) of Exhibit N (Additional Hosting Services Terms and Conditions) to the Agreement.

102. CORRECTIVE ACTION PLAN

"**Corrective Action Plan**" shall have the meaning specified in Section 6 (Corrective Action Plan) of Exhibit E (Service Levels and Performance Standards).

103. COST OF LIVING ADJUSTMENT OR COLA

"**Cost of Living Adjustment**" or "**COLA**" shall have the meaning specified in Section 14.10 (Cost of Living Adjustment).

104. COUNTY

"**County**" shall have the meaning specified in the Preamble to the Agreement.

105. COUNTY AND ITS AGENTS

"**County and its Agents**" shall have the meaning specified in Section 25.3 (Additional Insured Status and Scope of Coverage).

106. COUNTY COUNSEL

"**County Counsel**" shall mean the Office of the County Counsel of the County of Los Angeles.

107. COUNTY DATA

"**County Data**" shall have the meaning specified in Section 19.11 (County Data).

108. COUNTY DESIGNEE

"**County Designee**" shall have the meaning specified in Section 2.3 (County Designee).

109. COUNTY EXECUTIVE SESSION

"**County Executive Session**" shall have the meaning specified in task 11 (Conduct County Executive Session) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

110. COUNTY PROJECT DIRECTOR

"**County Project Director**" shall have the meaning specified in Section 10.1.1 (Project Director).

111. COUNTY PROJECT MANAGER

"**County Project Manager**" shall have the meaning specified in Section 10.1.3 (County Project Manager).

112. COUNTY PROPERTY

"**County Property**" shall have the meaning specified in Section 18.4 (Use of County Property).

113. COUNTY SOW LEAD OR COUNTY [NAME OF EXHIBIT] LEAD

"**County SOW Lead"** or **"County [name of Exhibit] Lead**" shall have the meaning specified in in each of the Statements of Work of the Agreement.

114. COUNTY SYSTEMS

"**County Systems**" shall have the meaning specified in Section 21 (Communication Systems and Access to Information).

115. COUNTY WORKGROUP

"**County Workgroup**" shall have the meaning specified in each of the Statements of Work of the Agreement.

116. COUNTY'S MITIGATION ACTS

"**County's Mitigation Acts**" shall have the meaning specified in Section 23.2(c) (Intellectual Property Indemnification).

117. CP

"**CP**" shall have the meaning specified in Section 2.2 (County).

118. CPI-W

"**CPI-W**" shall have the meaning specified in Section 14.10 (Cost of Living Adjustment).

119. CREDIT DUE DATE

"**Credit Due Date**" shall have the meaning specified in Section 14.3.2 (Credits to County).

120. CRITICAL PATH ESCALATION ISSUES

"**Critical Path Escalation Issues**" are defined as those issues directly and adversely impacting Contractor's or County's ability (as appropriate) to effectively meet such parties duties and obligations as specified in the applicable Statement of Work and which cannot be appropriately resolved or mitigated through adjustments to the Statement of Work without (a) affecting the date of completion of the Services, (b) materially impacting the costs of delivering the Services, or (c) increasing the total project costs.

121. CROSS-OVER ISSUES

"**Cross-Over Issues**" shall have the meaning specified in Section 30.1 (Cross-Over Issues).

122. CROSS COMMUNITY ACCESS OR XCA

"**Cross Community Access**" or "**XCA**" shall have the meaning specified in Exhibit EE (Interoperability Functionality) of the Agreement.

123. DASHBOARDS, CUSTOM REPORTING AND DATA ANALYTICS TRAINING

"**Dashboards, Custom Reporting and Data Analytics Training**" shall have the meaning specified in task 10.1 (Conduct Dashboards, Custom Reporting, and Data Analytics Training) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

124. DATA CONVERSION IMPLEMENTATION STRATEGY DOCUMENT

"**Data Conversion Implementation Strategy Document**" shall have the meaning specified in task 2.2 (Develop Data Conversion Implementation Strategy Document) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

125. DATA CONVERSION INITIATION SESSION

"**Data Conversion Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Data Conversion Workgroup) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

126. DATA CONVERSION SPECIFICATIONS

"**Data Conversion Specifications**" shall have the meaning specified in task 3.1 (Identify Data Conversion Specifications) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

127. DATA QUALITY ASSESSMENT

"**Data Quality Assessment**" shall have the meaning specified in task 2.1 (Confirm and Validate Data Sources) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

128. DCW

"**DCW**" shall have the meaning specified in the Statements of Work of the Agreement.

129. DDM

"**DDM**" shall have the meaning specified in task 3.1 (Conduct System Review Session) of Exhibits A.4 through A.17 of the Agreement.

130. DED

"**DED**" shall have the meaning specified in each of the Statements of Work of the Agreement.

131. DELIVERABLES

"**Deliverable(s)**", whether singular or plural, shall mean items and/or services provided or to be provided by Contractor under this Agreement identified as a deliverable, by designation, number, or context, in a Statement of Work, Exhibit, Attachment, Schedule, or any document associated with the foregoing, including numbered Deliverable(s) in Exhibit A (Statement of Work).

132. DELIVERABLES MANAGEMENT PLAN

"**Deliverables Management Plan**" shall have the meaning specified in task 4.11 (Develop Deliverables Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

133. DEPARTMENT

"**Department**" shall mean County's Department of Health Services. For purposes of Exhibit C (Fees; Contractor Professional Services Rates), "**Department**" shall have the meaning specified in Section 2.3 (Approved Physical Growth Event) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

134. DEPLOYMENT AND PROJECT CLOSE-OUT CHECKLIST

"**Deployment and Project Close-out Checklist**" shall have the meaning specified in task 3.6 (Develop Deployment and Project Close-out Checklist) of Exhibit A.23 (Deployment Statement of Work).

135. DEPLOYMENT INITIATION SESSION

"**Deployment Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Deployment Workgroup) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

136. DEPLOYMENT STRATEGY

"**Deployment Strategy**" shall have the meaning specified in task 2.1 (Validate and Maintain Deployment Strategy) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

137. DESIGN REVIEW SESSION

"**Design Review Session**" shall have the meaning specified in task 4.1 (Conduct Design Review Session) of Exhibits A.4 through A.17 of the Agreement.

138. DESIGNATED TEST

"**Designated Test**" shall have the meaning specified in Section 12.6(a) (Failed Testing).

139. DESTRUCTIVE MECHANISMS

"**Destructive Mechanisms**" means computer code that: (a) is designed to disrupt, disable, harm, or otherwise impede in any manner, including aesthetic disruptions or distortions, the operation of the Licensed Software, Deliverables, Services, or any other software, firmware, hardware, computer system or network (sometimes referred to as "viruses" or "worms"); (b) would disable or impair the Licensed Software, Deliverables, Services, or any other software, firmware, hardware, computer systems or networks in any way where such disablement or impairment is caused by the passage of time, exceeding an authorized number of copies, advancement to a particular date or other numeral (sometimes referred to as "time bombs," "time locks" or "drop dead" devices); (c) would permit Contractor to access the Licensed Software, Deliverables, Services, or any other software, firmware, hardware, computer systems or networks to cause such disablement or impairment (sometimes referred to as "traps," "access codes" or "trap door" devices); or (d) which contains any other similar harmful, malicious or hidden procedures, routines or mechanisms which would cause such Licensed Software, Deliverables, Services, or other programs to cease functioning or to damage or corrupt data, storage media, programs, equipment or communications or otherwise interfere with operations.

140. DETAILED DESIGN DOCUMENT

"**Detailed Design Document**" shall have the meaning specified in task 4.5 (Develop Final Detailed Design Document) of Exhibits A.4 through A.17 of the Agreement.

141. DHS

"**DHS**" shall have the meaning specified in Recital B.

142. DHS FINANCE

"**DHS Finance**" shall mean the County contact designated to receive and process invoices under this Agreement.

143. DIRECTOR

"**Director**" shall have the meaning specified in Recital B.

144. DISASTER RECOVERY PLAN

"**Disaster Recovery Plan**" shall have the meaning specified in Section 22 (Disaster Recovery/Business Continuity).

145. DISCLOSING PARTY

"**Disclosing Party**" shall have the meaning specified in Section 19.2 (Confidential Information Defined).

146. DISPLACED/RENAMED PRODUCT

"**Displaced/Renamed Product**" shall have the meaning specified in Section 3.2 (Revisions).

147. DISPUTE

"**Dispute**," for purposes of the procedures set forth in Section 27 (Dispute Resolution Procedure), shall have the meaning specified in Section 27 (Dispute Resolution Procedure).

148. DISPUTE RESOLUTION PROCEDURE

"**Dispute Resolution Procedure**" shall have the meaning specified in Section 27(a) (Dispute Resolution Procedure).

149. DOCUMENTATION

"**Documentation**" shall have the meaning specified in Section 3.3 (Documentation).

150. DOMAINS

"**Domains"** shall mean all types of care delivered by County, including clinical activities and supporting services. For illustration, examples include noninvasive cardiology, inpatient pharmacy services, sub-acute rehabilitation, emergency medical services, health information management, hospital/clinic administration, visiting nursing services, social services, pastoral support, respiratory therapy, and physical therapy.

151. DOWNTIME

"**Downtime**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

152. DR/BC PLAN

"**DR/BC Plan**" shall have the meaning specified in Section 22 (Disaster Recovery/Business Continuity.

153. EDUCATION TRACKER

"**Education Tracker**" shall have the described in the Statements of Work of the Agreement.

154. EDUCATION TRACKER REPORTS

"**Education Tracker Reports**" shall have the meaning specified in task 1.3 (Conduct Comprehension Exercises) of Exhibits A.4 through A.17 of the Agreement.

155. EFFECTIVE DATE

"**Effective Date**" shall have the meaning specified in the Preamble to the Agreement.

156. EHR

"**EHR**" shall have the meaning specified in Recital C.

157. EHR ARCHITECTURE AND HOSTING SERVICES INITIATION SESSION

"**EHR Architecture and Hosting Services Initiation Session**" shall have the meaning specified in task 1.2 (Initiation Session for Architecture and Hosting Services Workgroup) of Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) of the Agreement.

158. EHR SYSTEM

"**EHR System**" shall have the meaning specified in Recital C.

159. EHR SYSTEM AND USER DOCUMENTATION

"**EHR System and User Documentation**" shall have the meaning specified in task 2.2 (Compile EHR System and User Documentation for Handover to Production Support) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

160. EHR SYSTEM TESTING INITIATION SESSION

"**EHR System Testing Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for EHR System Testing Workgroup) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

161. EMERGENCY DEPARTMENT INITIATION SESSION

"**Emergency Department Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Emergency Department Workgroup) of Exhibit A.14 (Emergency Department Statement of Work) of the Agreement.

162. EMERGENCY ROLL-BACK PLAN

"**Emergency Roll-back Plan**" shall have the meaning specified in task 5.2 (Develop Emergency Roll-back Plan) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

163. EMPLOYEE

"**Employee**" shall have the meaning specified in Section 32.31.2(b) (Written Employee Jury Service Policy).

164. EMPLOYMENT CLAIM(S)

"**Employment Claim(s)**" shall have the meaning specified in Section 16.2 (Employment Related Claims).

165. END-USER SURVEY

"**End-User Survey**" shall have the meaning specified in task 8.2 (Support End-User Survey and Develop End-User Training Effectiveness Reports) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

166. END-USER TRAINING EFFECTIVENESS REPORT

"**End-User Training Effectiveness Report**" shall have the meaning specified in task 8.2 (Support End-User Survey and Develop End-User Training Effectiveness Reports) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

167. END-USER TRAINING STRATEGY

"**End-User Training Strategy**" shall have the meaning specified in task 8 (Develop End-User Training Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

168. ENHANCEMENT

"**Enhancement**" means any modification to any Licensed Software designed to improve its operation, usefulness, or completeness that is made generally available by Contractor (excluding Error Corrections) to clients.

169. ENTERPRISE-WIDE USER SECURITY PROFILES DOCUMENT

"**Enterprise-wide User Security Profiles Document**" shall have the meaning specified in task 4.1 (Document User Security Profiles (Roles and Authorizations)) of Exhibit A.19 (Security Statement of Work) of the Agreement.

170. ERISA

"**ERISA**" shall have the meaning specified in Section 16.3 (No Eligibility for Benefits).

171. ERROR

"**Error**" means (i) with respect to Licensed Software, Services, or Deliverables, a failure of the Licensed Software, Services, or Deliverables to conform to its Specifications, or (ii) with respect to the Licensed Software, a failure that creates a material impact on the performance of the Licensed Software when operated in accordance with the Agreement.

172. ERROR CORRECTION

"**Error Correction**" means (i) with respect to Licensed Software, either a modification to the Licensed Software that corrects an Error in all material respects, or a procedure or routine that, when implemented in the regular operation of that Licensed Software, eliminates the adverse effect of the Error in all material respects, and (ii) with respect to Services or Deliverables, modification, workaround, or performance that corrects an Error in all material respects or eliminates the adverse effects of the Error in all material respects.

173. ERROR MANAGEMENT PLAN OR EMP

"**Error Management Plan**" or "**EMP**" shall have the meaning specified in task 4.3 (Develop Error Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

174. ESCROW

"**Escrow**" shall have the meaning specified in Section 4.1 (Escrow Agent and Release Conditions).

175. ESCROW AGENT

"**Escrow Agent**" shall have the meaning specified in Section 4.1 (Escrow Agent and Release Conditions).

176. ESCROW AGREEMENT

"**Escrow Agreement**" shall have the meaning specified in Section 4.1 (Escrow Agent and Release Conditions).

177. ESTABLISH AMS DELIVERY MODEL

"**Establish AMS Delivery Model**" shall have the meaning specified in task 3.1 (Establish AMS Delivery Model for County) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

178. EVENT SUMMARY REPORT

"**Event Summary Report**" shall have the meaning specified in each of the Statements of Work of the Agreement.

179. EXECUTIVE PROJECT UPDATES

"**Executive Project Updates**" shall have the meaning specified in task 4.12 (Develop Procedures for Status Meetings/Reporting) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

180. EXHIBIT

"**Exhibit**" shall have the meaning specified in the Preamble to the Agreement.

181. EXISTING AGREEMENT(S)

"**Existing Agreement(s)**" shall have the meaning specified in Section 2.4 (Optional Work and Discounts) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

182. EXISTING SYSTEM

"**Existing System**" shall have the meaning specified in Section 17.1.9 (System Configuration Warranty).

183. EXTENDED TIMEOUT

"**Extended Timeout**" shall have the meaning specified in Section 2.2.4 (Ratio Protection) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

184. EXTRACT, TRANSFER AND LOAD TOOLS

"**Extract, Transfer and Load Tools**" shall have the meaning specified in task 4.1 (Execute Data Conversion Pilot) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

185. FINAL ACCEPTANCE

"**Final Acceptance**" shall have the meaning specified in Section 12.5.3 (Final Acceptance).

186. FINALLY DETERMINED

"**Finally Determined**" means when a claim or dispute has been finally determined by a court of competent jurisdiction, arbitration, mediation, or other agreed-upon governing party and either (1) no associated appeal has timely been sought if capable of being sought, or (2) appellate rights properly exercised have otherwise been exhausted.

187. FIXED HOURLY RATE

"**Fixed Hourly Rate**" shall mean the hourly rate, specified in Exhibit C (Fees; Contractor Professional Services Rates), for Professional Services which Contractor may provide following Go-Live upon County's request therefor in the form of Optional Work in accordance with Section 9.8 (Optional Work).

188. FORCE MAJEURE EVENTS

"**Force Majeure Events**" shall have the meaning specified in Section 32.1(a) (Force Majeure).

189. FULL-TIME

"**Full-Time**" shall have the meaning specified in Section 32.31.2(b) (Written Employee Jury Service Policy).

190. FUNCTIONAL READINESS ASSESSMENT

"**Functional Readiness Assessment**" shall have the meaning specified in task 4.2 (Conduct Functional Readiness Assessment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

191. FUTURE STATE WORKFLOW DIAGRAMS

"**Future State Workflow Diagrams**" shall have the meaning specified in task 4.3 (Conduct Workflow Localization) of Exhibits A.4 through A.17 of the Agreement.

192. GENERALLY AVAILABLE

"**Generally Available**" shall mean available as a non-development product and licensed, distributed, or available for purchase in the general commercial market place.

193. GLOBAL HARMONIZATION TASK FORCE OR GHTF

"**Global Harmonization Task Force**" or "**GHTF**" shall have the meaning specified in Section 3.4 (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

194. GO-LIVE

"**Go-Live**" shall have the meaning specified in Section 12.3 (Productive Use).

195. GO-LIVE EVENT STAFFING AND SUPPORT MODEL

"**Go-Live Event Staffing and Support Model**" shall have the meaning specified in task 3.3 (Develop Go-Live Event Staffing and Support Model) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

196. GO-LIVE HELP DESK SCRIPTS

"**Go-Live Help Desk Scripts**" shall have the meaning specified in task 3.4 (Develop Go-Live Help Desk Scripts) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

197. GO/NO-GO

"**Go/No-Go**" shall have the meaning specified in task 3.1 (Develop Go-Live Go/No-Go Framework and Processes) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

198. GO/NO-GO DECISION FRAMEWORK AND PROCESSES

"**Go/No-Go Decision Framework and Processes**" shall have the meaning specified in task 3.1 (Develop Go-Live Go/No-Go Framework and Processes) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

199. HARDWARE

"**Hardware**" shall have the meaning specified in Section 8 (Hardware).

200. HEALTHE INTENT SERVICES"

"**Healthe Intent Services**" shall have the meaning set forth in Section 32.41 (Healthe Intent Services).

201. HHS

"**HHS**" shall have the meaning specified in Recital E.

202. HIE

"**HIE**" shall have the meaning specified in Section 2.2 (County).

203. HIPAA

"**HIPAA**" shall have the meaning specified in Section 19.10 (Compliance With Federal and State Confidentiality Requirements).

204. HIT

"**HIT**" shall have the meaning specified in Recital C.

205. HITECH ACT

"**HITECH Act**" shall have the meaning specified in Section 17.1.17 (HITECH Technical Standards Warranty).

206. HITECH MODIFICATIONS

"**HITECH Modifications**" shall have the meaning specified in Section 17.1.17 (HITECH Technical Standards Warranty).

207. HITECH TECHNICAL STANDARDS

"**HITECH Technical Standards**" means defined technical standards that: (i) are finalized and formally adopted and published ("**Finalized**") by the Secretary of Health and Human Services (the "**Secretary**") under the HITECH Act; (ii) impose requirements with respect to the functionalities and transactions the Licensed Software is designed to include and process; and (iii) define necessary elements of Certified EHR Technology.

208. HOLDBACK AMOUNT

"**Holdback Amount**" shall have the meaning specified in Section 15.6(a) (Holdbacks).

209. HOSTING ENVIRONMENT

"**Hosting Environment**" shall mean Contractor Primary Data Center, the Contractor Secondary Data Center and all facilities, personnel, Hosting Hardware and Hosting Software and all requirements specified in Section 3 (Hosting Environment) of Exhibit N.1 (Hosting Services), Sections 1.1 (General Requirements) and 3.2 (Data Replication Across Data Centers) of Exhibit E (Service Levels and Performance Standards), and Sections 7.5 (Recovery Time Requirement) and 7.6 (Contractor Secondary Data Center) of Exhibit N (Additional Hosting Services Terms and Conditions).

210. HOSTING ERROR CORRECTION

"**Hosting Error Correction**" means (i) with respect to Hosting Environment, either a modification, workaround, or other change to the Hosting Software or Hosting Hardware that corrects an Error in all material respects, or a procedure or routine that, when implemented in the regular operation of the Hosting Environment, eliminates the adverse effect of the Error in all material respects, and (ii) with respect to Hosting Services or Deliverables, a modification, workaround, or other change that corrects an Error in all material respects or eliminates the adverse effects of the Error in all material respects.

211. HOSTING HARDWARE

"**Hosting Hardware**" shall mean hardware and equipment of any nature (e.g., Servers, networking equipment, switches, routers, power infrastructure), utilized in the Hosting Environment to provide the Hosting Services.

212. HOSTING PROVIDER

"**Hosting Provider**" shall have the meaning specified in Section 1.2 (Hosting Provider) of Exhibit E (Service Levels and Performance Standards).

213. HOSTING REVISIONS

"**Hosting Revisions**" shall mean as to the Hosting Software (i) new features, new functionality, and performance improvements, (ii) bug fixes, patches, updates, and any other revisions or

enhancements of any kind that correct an Error or address common functional and performance issues, including Hosting Error Correction; (iii) updates, revisions, or enhancements; (iv) any modification to the Hosting Software designed to improve its operation, usefulness, or completeness that is made generally available by Contractor (excluding Error Corrections) to its clients; and (v) modifications, workarounds, or other changes required in order for the Hosting Software to remain compliant with applicable federal, State and local laws and regulations.

214. HOSTING SERVICES

"**Hosting Services**" shall have the meaning specified in Section 1(a) (Scope of Services) of Exhibit N.1 (Hosting Services).

215. HOSTING SERVICES DELIVERY DOCUMENT

"**Hosting Services Delivery Document**" shall have the meaning specified in task 4.1 (Prepare Hosting Services Delivery Document) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

216. HOSTING SERVICES DELIVERY MODEL

"**Hosting Services Delivery Model**" shall have the meaning specified in task 2.1 (Develop and Maintain Production Support Plan) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

217. HOSTING SERVICES PLAN

"**Hosting Services Plan**" shall have the meaning specified in task 6.1 (Initiate Remote Hosting Services for Production Environment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

218. HOSTING SOFTWARE

"**Hosting Software**" shall mean software of any nature (e.g. operating systems, presentation layer software, applications, utilities, tools, firmware and security) utilized in the Hosting Environment to provide the Hosting Services.

219. HVAC OR HEATING, VENTILATION AND AIR CONDITIONING

"**HVAC**" or "heating, ventilation and air conditioning" shall have the meaning specified in Section 3.2(b) (Physical Environment) of Exhibit N.1 (Hosting Services).

220. ID

"**ID**" shall have the meaning specified in Section 9.10 (Contractor Access to County Facilities).

221. IDENTITY ACCESS MANAGEMENT OR IAM

"**Identity Access Management**" or "**IAM**" shall have the meaning specified in task 4.2 (Implement User Roles and Authorizations) of Exhibit A.19 (Security Statement of Work) of the Agreement.

222. IMMEDIATE RESPONSE CENTER OR IRC

"**Immediate Response Center**" or "**IRC**" shall have the meaning specified in Section 7.1 (Disaster Recovery and Business Continuity Plan) of Exhibit N (Additional Hosting Services Terms and Conditions) to the Agreement.

223. IMPLEMENTATION FEES

"**Implementation Fees**" shall have the meaning specified in Section 14.3.1 (Implementation Fees).

224. IMPLEMENTATION SERVICES

"**Implementation Services**" shall mean the Services as set forth in Section 9.4 (Implementation Services and as further specified in Exhibit A (Statements of Work). The Implementation Services are also sometimes referred to as the "**Project**."

225. IMPLEMENTATION TEAM TRAINING

"**Implementation Team Training**" shall have the meaning specified in task 6.1 (Conduct Implementation Team Training) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

226. INCIDENT/PROBLEM MANAGEMENT REPORT

"**Incident/Problem Management Report**" shall have the meaning specified in task 3.8 (Provide Incident/Problem Management and Resolution) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

227. INDEMNIFIED ITEMS

"**Indemnified Items**" shall have the meaning specified in Section 23.2(a) (Intellectual Property Infringement).

228. INFORMATION SECURITY POLICY

"**Information Security Policy**" shall have the meaning specified in Section 1 (Security Policy) of Exhibit K (Information Security Requirements).

229. INFRINGEMENT CLAIM(S)

"**Infringement Claim(s)**" shall have the meaning specified in Section 23.2(a) (Intellectual Property Indemnification).

230. IN-HOUSE SOLUTION

"**In-House Solution**" shall have the meaning specified in Section 2 (In-House Solution) of Exhibit N (Additional Hosting Services Terms and Conditions) to the Agreement.

231. INITIAL PARTIAL SYSTEM BUILD

"**Initial Partial System Build**" shall have the meaning specified in task 5 (Complete Initial Partial System Build) of Exhibits A.4 through A.17 of the Agreement.

232. INITIAL SUPPORT TERM

"**Initial Support Term**" shall have the meaning specified in Section 1.2 (Initial and Renewal Support Terms for Support Services).

233. INSTRUCTOR-LED TRAINING FRAMEWORK AND CURRICULUM

"**Instructor-Led Training Framework and Curriculum**" shall have the meaning specified in task 2.3 (Develop Instructor-Led Training Framework) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

234. INTEGRAL THIRD-PARTY SOFTWARE

"**Integral Third-Party Software**" shall mean all software licensed, leased, or otherwise obtained by Contractor from a third-party which is: (i) embedded in, (ii) incorporated into (excluding Interfacing to), or (iii) essential to the proper operation of, the Contractor-developed Licensed Software, and all other Third-Party Products With Independent Conditions that are not expressly identified in Exhibit B (EHR System Software Components).

235. INTEGRATING THE HEALTHCARE ENTERPRISE OR IHE

"**Integrating The Healthcare Enterprise**" or "**IHE**" shall have the meaning specified in Exhibit EE (Interoperability Functionality) of the Agreement.

236. INTEGRATION TEST

"**Integration Test**" shall have the meaning specified in task 7 (Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing) of Exhibits A.4 through A.17 of the Agreement.

237. INTEGRATION TESTING

"**Integration Testing**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Data Conversion Workgroup) of Exhibit A.18 (Data Conversion Statement of Work).

238. INTENSIVE CARE UNIT INITIATION SESSION

"**Intensive Care Unit Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Intensive Care Unit Workgroup) of Exhibit A.13 (Intensive Care Unit Statement of Work) of the Agreement.

239. INTERFACE(S)

"**Interface(s)**" when used as a noun, shall mean either a computer program developed by, or licensed to, County or Contractor to (a) translate or convert data from a County or Contractor format into another format used at County as a standard format, or (b) translate or convert data in a format used by Contractor or a third-party to a format supported at County or vice versa.

"**Interface**" when used as a verb, shall mean to operate as described above.

240. INTERFACE SPECIFICATIONS DOCUMENT

"**Interface Specifications Document**" shall have the meaning specified in task 3.1 (Document Functional and Technical Specifications for Interfaces) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

241. INTERFACE TESTING

"**Interface Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

242. INTERFACE TEST PLAN

"**Interface Test Plan**" shall have the meaning specified in task 3.2 (Develop Interface Test Plan) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

243. INTERFACES CURRENT STATE ASSESSMENT

"**Interfaces Current State Assessment**" shall have the meaning specified in task 2.1 (Document Interfaces Current State Assessment) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

244. INTERFACES IMPLEMENTATION STRATEGY DOCUMENT

"**Interfaces Implementation Strategy Document**" shall have the meaning specified in task 2.2 (Prepare Implementation Interfaces Strategy Document) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

245. INTERFACES INITIATION SESSION

"**Interfaces Initiation Session**" shall have the meaning specified in task 1.2 (Initiation Session for Interfaces Workgroup) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

246. INTERNET PROTOCOL SECURITY OR IPSEC

"**Internet Protocol Security**" or "**IPsec**" shall have the meaning specified in Section 3.4(a) (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

247. INTEROPERABLE

"**Interoperable**" shall have the meaning ascribed to the term "interoperable" under 42 C.F.R. §411.351 as follows (and the variations of Interoperable used herein shall have their meanings determined from the following): "Interoperable means able to communicate and exchange data accurately, effectively, securely, and consistently with different information technology systems, software applications, and networks, in various settings; and exchange data such that the clinical or operational purpose and meaning of the data are preserved and unaltered." However, if and to the extent that a different definition of Interoperable is adopted by the Department of Health and Human Services for use in describing information exchange functionality in connection with defining meaningful use of certified EHR technology within the meaning of the HITECH Act, then that different definition shall apply for purposes of this Agreement

248. INTEROPERATE

"**Interoperate**" shall mean to operate as described in the definition of "Interoperable."

249. ISSUE AND RISK LOGS

"**Issue and Risk Logs**" shall have the meaning specified in task 2.1 (Coordination of Project Activities between SOWs) of Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) of the Agreement.

250. ISSUE MANAGEMENT PLAN

"**Issue Management Plan**" shall have the meaning specified in task 3.6 (Perform Issue Management) of Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) of the Agreement.

251. ISSUES LOG

"**Issues Log**" shall have the meaning specified in task 4.1 (Conduct Design Review Session) of Exhibits A.4 through A.17 of the Agreement.

252. ISSUES MANAGEMENT PLAN

"**Issues Management Plan**" shall have the meaning specified in task 4.8 (Develop Issues Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

253. IT ANALYST PREP SESSION

254. "**IT ANALYST PREP SESSION**" SHALL HAVE THE MEANING SPECIFIED IN TASK 12.8 (CONDUCT IT ANALYST PREP SESSION) OF EXHIBIT A.2 (PROJECT INITIATION STATEMENT OF WORK) OF THE AGREEMENT.JURY SERVICE PROGRAM

"**Jury Service Program**" shall have the meaning specified in Section 32.31.1 (Jury Service Program).

255. KEY DELIVERABLE

"**Key Deliverable**" shall have the meaning specified in Section 14.3.2 (Credits to County).

256. KEY MILESTONE(S)

"**Key Milestone(s)**", whether singular or plural, shall mean Milestones under the Agreement identified as "Key" in a Statement of Work, Exhibit, Attachment, Schedule, or any document associated with the foregoing.

257. KEY MILESTONE ALLOCATION

"**Key Milestone Allocation**" shall have the meaning specified in Section 15.6(a) (Holdbacks).

258. KEY MILESTONE SCHEDULED DURATION

"**Key Milestone Scheduled Duration**" shall have the meaning specified in Section 15.6(a) (Holdbacks).

259. KNOWLEDGE TRANSFER PLAN

"**Knowledge Transfer Plan**" shall have the meaning specified in task 2.4 (Develop Knowledge Transfer Plan) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

260. KNOWLEDGE TRANSFER STRATEGY

"**Knowledge Transfer Strategy**" shall have the meaning specified in task 7 (Develop Knowledge Transfer Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

261. LABORATORY INITIATION SESSION

"**Laboratory Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Laboratory Workgroup) of Exhibit A.10 (Laboratory Statement of Work) of the Agreement.

262. LANES

"**LANES**" shall mean the Los Angeles Network for Enhanced Services.

263. LEADING STRATEGIC CHANGE SESSION

"**Leading Strategic Change Session**" shall have the meaning specified in task 5.1 (Conduct Communications Strategy Review) of Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) of the Agreement.

264. LEADING STRATEGIC CHANGE WORKSHOP

"**Leading Strategic Change Workshop**" shall have the meaning specified in task 6.2 (Develop Organization Change Management Strategy) of Exhibit A.2 (Project Initiation Statement of Work).

265. LEARNINGLIVE

"**LearningLIVE**" shall have the meaning specified in task 4.2 (Implement and Deploy the LearningLIVE Environment) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

266. LEGAL REQUIREMENTS

"**Legal Requirements**" shall have the meaning specified in Section 17.1.11 (Legal and Accreditation/Certification Requirements).

267. LEVEL 1 HELP DESK SCRIPTS

"**Level 1 Help Desk Scripts**" shall have the meaning specified in task 9.1 (Develop Help Desk Scripts) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

268. LEVEL 2 HELP DESK SCRIPTS

"**Level 2 Help Desk Scripts**" shall have the meaning specified in task 9.1 (Develop Help Desk Scripts) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

269. LICENSE

"**License**" shall have the meaning specified in Section 3.1.1 (Licensed Software).

270. LICENSE TERM

"**License Term**" shall have the meaning specified in Section 1.3 (Term of Statements of Work; License Term).

271. LICENSED SOFTWARE

"**Licensed Software**" shall mean individually each, and collectively all, of the computer programs and Modules developed by Contractor and to be provided under this Agreement (including Integral Third-Party Software), including as to each such program or Module, the processes and routines used in the processing of data, the object code, Interfaces to be provided hereunder by Contractor, Documentation, Revisions, and derivative works. All Licensed Software and the components thereof shall be release versions, and shall not be test versions (e.g., alpha or beta test version), unless otherwise agreed to in writing by County.

272. LICENSED SOFTWARE AND THIRD-PARTY PRODUCTS FUNDAMENTALS COURSE

"**Licensed Software and Third-Party Products Fundamentals Course**" shall have the meaning specified in task 12.6 (Licensed Software and Third-Party Products Fundamentals Course) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

273. LICENSED SOFTWARE REQUIREMENTS

"**Licensed Software Requirements**" shall mean the Licensed Software Specifications, requirements and standards set forth in Exhibit A.26 (Licensed Software Requirements).

274. LICENSED SOFTWARE RESPONSE TIME

"**Licensed Software Response Time**" shall be the period from the time the County User depresses the return or function key, clicks the mouse, taps the touch pad, or otherwise engages a device or command in connection with a Licensed Software transaction, until the complete screen of the response for the Licensed Software transaction appears on the County User's screen. "Processing" or similar waiting messages do not constitute responses hereunder.

275. LIGHTHOUSE OFFERING

"**Lighthouse Offering**" shall have the meaning specified in Section 4 (Lighthouse Offering) of Exhibit C.1 (Optional Work) to the Agreement.

276. LOAD TESTING

"**Load Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

277. LOCATIONS

"**Locations**" shall mean all County physical locations, structures, or location groupings utilized by DHS.

278. LOCATION READINESS ASSESSMENT

"**Location Readiness Assessment**" shall have the meaning specified in task 4.3 (Conduct Location Readiness Assessment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

279. LON

"**LON**" shall have the meaning specified in task 5.1 (Develop Remote Hosting Services Plan) of Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) of the Agreement.

280. MACC

"**MACC**" shall have the meaning specified in Section 2.3 (Approved Physical Growth Event) of Section 2.3 (Approved Physical Growth Event) Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

281. MASTER TRAINING PROGRAM

"**Master Training Program**" shall have the meaning specified in task 2.1 (Develop and Maintain Master Training Program) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

282. MAXIMUM FIXED PRICE

"**Maximum Fixed Price**" shall mean the maximum amount to be paid by County to Contractor for any Optional Work approved by County to be provided by Contractor in accordance with Section 9.8 (Optional Work).

283. MEANINGFUL USE

"**Meaningful Use**" shall mean "meaningful use" as defined under the ARRA and its implementing rules and regulations, including but not limited to the Stage 1 meaningful use criteria set forth in Exhibit V (Meaningful Use Criteria).

284. MECHANICAL, ELECTRONIC, AND PLUMBING OR MEP

"**Mechanical, Electronic, and Plumbing**" or "**MEP**" shall have the meaning specified in Section 3.2 (Physical Environment) of Exhibit N.1 (Hosting Services).

285. MEDICAL RECORDS INITIATION SESSION

"**Medical Records Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Medical Records Workgroup) of Exhibit A.16 (Medical Records Statement of Work) of the Agreement.

286. METHODM

"**MethodM**" shall have the meaning specified in each of the Statements of Work of the Agreement.

287. METHODM ONLINE

"**MethodM Online**" shall have the meaning specified in each of the Statements of Work of the Agreement.

288. MILESTONE(S)

"**Milestone(s)**", whether singular or plural, shall mean the date identified for completion of a specific subset of the Services as specified in a Statement of Work, Exhibit, Attachment, Schedule, or any document associated with the foregoing.

289. MILESTONE PAYMENTS

"**Milestone Payments**" shall have the meaning specified in Section 2.1 (Milestone Payments) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

290. MILESTONE PAYMENTS ITEMS THAT TRANSITION

"**Milestone Payments Items That Transition**" shall have the meaning specified in Section 2.1 (Milestone Payments) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

291. MODULE

"**Module**" shall mean a self-contained unit of the Licensed Software that has its own discrete function and may be separately compiled.

292. MONTHLY KEY MILESTONE PAYMENT

"**Monthly Key Milestone Payment**" shall have the meaning specified in Section 15.6(a) (Holdbacks).

293. NATURAL DEGENERATION

"**Natural Degeneration**" shall have the meaning specified in Section 4.2 (Natural Degeneration).

294. NETWORK ADDRESS TRANSLATION OR NAT

"**Network Address Translation**" or "**NAT**" shall have the meaning specified in Section 3.4(b) (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

295. NEW SOFTWARE

"**New Software**" means any function or module of Contractor-developed software that:

(i) is not included in the Licensed Software marketed by Contractor as of the Effective Date;

(ii) fulfills a different primary function or is delivered on a different end-user platform than the Licensed Software; and

(iii) is not otherwise to be provided to County under this Agreement as a Revision to the Licensed Software.

Contractor may provide New Software following First Productive Use upon County's request therefor in the form of Optional Work in accordance with Section 9.8 (Optional Work).

296. OCM STRATEGY

"**OCM Strategy**" shall have the meaning specified in task 6 (Develop Strategic Assessment and Organizational Change Management Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

297. OCM STRATEGY REPORT

"**OCM Strategy Report**" shall have the meaning specified in task 6.2 (Develop Organization Change Management Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

298. OIG

"**OIG**" shall have the meaning specified in Recital E.

299. OMISSIONS

"**Omissions**" shall have the meaning specified in task 7.2 (Resolve Defects and Implement County-Approved Change Requests) of Exhibits A.4 through A.17 of the Agreement.

300. ONC

"**ONC**" shall have the meaning specified in Recital E.

301. ONC-ATCB

"**ONC-ATCB**" shall have the meaning specified in Section 17.1.17 (HITECH Technical Standards Warranty).

302. OPEN HOUSE DOMAIN

"**Open House Domain**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Clinical Documentation and Results Workgroup) of Exhibits A.4 through A.17 of the Agreement.

303. OPEN SOURCE SOFTWARE

"**Open Source Software**" shall mean any software, programming, or other intellectual property that is subject to (a) the GNU General Public License, GNU Library General Public License, Artistic License, BSD license, Mozilla Public License, or any similar license, including, but not limited to, those licenses listed at www.opensource.org/licenses, or (b) any agreement with terms requiring any intellectual property owned or licensed by County to be (i) disclosed or distributed in source code or object code form; (ii) licensed for the purpose of making derivative works; or (iii) redistributable**.** Depending on how Contractor uses or delivers Open Source Software, it may be Integral Third-Party Software or Third-Party Products. Contractor agrees to utilize Open Source Software in accordance with its established open source policies and procedures. Open Source Software need not be separately identified regardless of its classification as Integral Third-Party Software or Third-Party Products.

304. OPERATIONS AND ADMINISTRATION PROCEDURES

"**Operations and Administration Procedures**" shall have the meaning specified in task 3.5 (Develop Operations and Administration Procedures Related to the Deployment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

305. OPTIONAL WORK

"**Optional Work**" shall mean New Software (which may include third-party software provided through Contractor), content and/or Professional Services, which may be provided by Contractor to County upon County's request and approval in accordance with Section 9.8 (Optional Work) and identified appropriately in Exhibit C.1 (Optional Work).

306. OR AND ANESTHESIOLOGY INITIATION SESSION

"**OR and Anesthesiology Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for OR and Anesthesiology Workgroup) of Exhibit A.12 (OR and Anesthesiology Statement of Work) of the Agreement.

307. ORDER MANAGEMENT, CPOE AND DECISION SUPPORT INITIATION SESSION

"**Order Management, CPOE and Decision Support Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Order Management, CPOE and Decision Support Workgroup) of Exhibit A.8 (Order Management, CPOE and Decision Support Statement of Work) of the Agreement.

308. OUTAGE

"**Outage**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

309. PARALLEL TESTING

"**Parallel Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

310. PARTIES

"**Parties**" shall have the meaning specified in the Preamble to the Agreement.

311. PARTY

"**Party**" shall have the meaning specified in the Preamble to the Agreement.

312. PAYMENT CARD INDUSTRY OR PCI

"**Payment Card Industry**" or "**PCI**" shall have the meaning specified in Section 15.11 (Contractor Self-Audit).

313. PC BASICS COURSE

"**PC Basics Course**" shall have the meaning specified in task 12.3 (Conduct PC Basics Course) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

314. PEAK CONCURRENT USERS OF ETREBY

"**Peak Concurrent Users of Etreby**" shall have the meaning specified in Section 1 (Etreby Hosting Services) of Exhibit C.1 (Optional Work) to the Agreement.

315. PEAK CONCURRENT USERS

"**Peak Concurrent Users**" shall have the meaning specified in Section 2.2.3 (Concurrent User Definitions) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

316. PEAK CONCURRENT USERS OF POWERINSIGHT

"**Peak Concurrent Users of PowerInsight**" shall have the meaning specified in Section 2.2.3 (Concurrent User Definitions) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

317. PEAK HOURS

"**Peak Hours**" shall have the meaning specified in Section 4.5 (Response Times) of Exhibit E (Service Levels and Performance Standards).

318. PERFORMANCE REQUIREMENTS

"**Performance Requirements**" shall mean the performance requirements for the Licensed Software provided in writing, as updated from time to time, including those requirements specified in Exhibit E (Service Levels and Performance Standards).

319. PERMITTED SUBCONTRACTOR

"**Permitted Subcontractor**" shall have the meaning specified in Section 2.1(b) (Contractor; Subcontracting).

320. PERSONAL DATA

"**Personal Data**" shall mean any information that identifies a person, including, but not limited to, name, address, email address, passwords, account numbers, social security numbers, credit card information, personal financial or healthcare information, personal preferences, demographic data, marketing data, credit data, or any other identification data. For the avoidance of doubt, Personal Data shall include, but not be limited to, all "nonpublic personal information," as defined under the Gramm-Leach-Bliley Act (15 United States Code ("**U.S.C.**") §6801 et seq.), Protected Health Information, and "Personal Data" as that term is defined in EU Data Protection Directive (Directive 95/46/EEC) on the protection of individuals with regard to processing of personal data and the free movement of such data.

321. PHARMACY AND MEDICAL MANAGEMENT INITIATION SESSION

"**Pharmacy and Medical Management Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Pharmacy and Medication Management Workgroup) of Exhibit A.11 (Pharmacy and Medication Management Statement of Work) of the Agreement.

322. PHYSICIAN AND NURSING (CLINICIAN) SESSIONS

"**Physician and Nursing (Clinician) Sessions**" shall have the meaning specified in task 12.9 (Conduct Physicians and Nursing (Clinician) Sessions) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

323. PILOT DATA CONVERSION PLAN

"**Pilot Data Conversion Plan**" shall have the meaning specified in task 4.1 (Execute Data Conversion Pilot) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

324. PILOT DATA CONVERSION REPORT

"**Pilot Data Conversion Report**" shall have the meaning specified in task 4.1 (Execute Data Conversion Pilot) of Exhibit A.18 (Data Conversion Statement of Work) of the Agreement.

325. POOL DOLLARS

"**Pool Dollars**" shall mean, absent an Amendment in accordance with Section 13 (Changes to Agreement), the maximum amount allocated under this Agreement for the provision by Contractor of Optional Work, including New Software and Professional Services, approved by County in accordance with the terms of this Agreement.

326. POST GO-LIVE ASSESSMENT

"**Post Go-Live Assessment**" shall have the meaning specified in task 9.3 (Conduct Post Go-Live Assessment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

327. POST GO-LIVE TRAINING EFFICACY REPORT

"**Post Go-Live Training Efficacy Report**" shall have the meaning specified in task 8.3 (Post Go-Live Evaluation of Training Efficacy) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

328. POWER DISTRIBUTION UNITS OR PDUS

"**Power Distribution Units**" or "**PDUs**" shall have the meaning specified in Section 3.2(a) (Physical Environment) of Exhibit N.1 (Hosting Services).

329. PRIMARY EVENT

"**Primary Event**" shall have the meaning specified in Section 24 (Limitation of Liability and Step Down Limitation of Liability).

330. PRIVACY AND SECURITY LAWS

"**Privacy and Security Laws**" shall have the meaning specified in Section 19.10 (Compliance With Federal and State Confidentiality Requirements).

331. PRIVACY AND SECURITY REGULATIONS

"**Privacy and Security Regulations**" shall have the meaning specified in the Preamble of Exhibit F (Business Associate Agreement).

332. PROBATION ELECTRONIC MEDICAL RECORD SYSTEM OR PEMRS

"**Probation Electronic Medical Record System**" or "**PEMRS**" shall have the meaning specified in Exhibit EE (Interoperability Functionality) of the Agreement.

333. PROCEDURES FOR STATUS MEETINGS/REPORTS

"**Procedures for Status Meetings/Reports**" shall have the meaning specified in task 4.12 (Develop Procedures for Status Meetings/Reporting) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

334. PROCESS OR PROCESSING

"**Process**" or "**Processing**" shall mean any operation or set of operations performed upon the Personal Data, whether or not by automatic means, including collection, recording, organization, use, transfer, disclosure, storage, manipulation, combination and deletion of Personal Data.

335. PRODUCTION CUTOVER PLAN

"**Production Cutover Plan**" shall have the meaning specified in task 5.1 (Develop Production Cutover Plan) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

336. PRODUCTION ENVIRONMENT

"**Production Environment**" shall mean the Existing System, together with any Hardware purchased hereunder and Contractor's Recommended Configuration, set up for Production Use of the Licensed Software.

337. PRODUCTION ENVIRONMENT CHANGE AUTHORIZATION OR PECA

"**Production Environment Change Authorization**" or "**PECA**" shall have the meaning specified in task 3.12 (Provide Technology Change Management) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

338. PRODUCTION SUPPORT PLAN

"**Production Support Plan**" shall have the meaning specified in task 2.1 (Develop and Maintain Production Support Plan) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

339. PRODUCTIVE USE

"**Productive Use**" shall mean the actual use of the Licensed Software in the Production Environment to process actual data in County's day-to-day operations commencing from the point of Go-Live.

340. PROFESSIONAL SERVICES

"**Professional Services**" shall mean consulting services, additional training and/or customizations, which Contractor may provide upon County's request therefor in the form of Optional Work in accordance with Section 9.8 (Optional Work).

341. PROFICIENCY ASSESSMENT

"**Proficiency Assessment**" shall have the meaning specified in task 12.1 (Conduct Project Management Workshop) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

342. PROJECT CHANGE MANAGEMENT PLAN

"**Project Change Management Plan**" shall have the meaning specified in task 4.9 (Develop Project Change Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

343. PROJECT CHARTER

"**Project Charter**" shall have the meaning specified in task 1 (Develop Project Charter) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

344. PROJECT COMMUNICATIONS STRATEGY

"**Project Communications Strategy**" shall have the meaning specified in task 4.4 (Develop Project Communications Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

345. PROJECT CONTROL DOCUMENT

"**Project Control Document**" shall mean a detailed project plan for the implementation of the Licensed Software provided by Contractor and set forth in Exhibit A.25 (Project Control Document).

346. PROJECT KICKOFF

"**Project Kickoff**" shall have the meaning specified in task 13 (Conduct Project Kickoff) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

347. PROJECT LIBRARY

"**Project Library**" shall have the meaning specified in task 6 (Maintain Project Library on MethodM Online) of Exhibit A.1 (Overall Project Management, Planning, Coordination and Integration Statement of Work) of the Agreement.

348. PROJECT MANAGEMENT WORKSHOP

"**Project Management Workshop**" shall have the meaning specified in task 12.1 (Conduct Project Management Workshop) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

349. PROJECT ORGANIZATIONAL CHART

"**Project Organizational Chart**" shall have the meaning specified in task 4.6 (Develop Project Staffing and Resource Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

350. PROJECT OVERRUN

"**Project Overrun**" shall have the meaning specified in Section 14.7.2(b) (Time and Materials).

351. PROJECT PREPARATION SESSIONS

"**Project Preparation Sessions**" shall have the meaning specified in task 12 (Conduct Project Preparation Sessions) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

352. PROJECT SCHEDULE

"**Project Schedule**" shall mean the agreed upon timeline for Implementation Services tasks, subtasks, and Deliverables specified in Exhibit A (Statements of Work).

353. PROJECT STAFFING AND RESOURCE MANAGEMENT PLAN

"**Project Staffing and Resource Management Plan**" shall have the meaning specified in task 4.6 (Develop Project Staffing and Resource Management Plan) of Exhibit A.2 (Project Initiation Statement of Work.

354. PROJECT TEAM WORKSHOP

"**Project Team Workshop**" shall have the meaning specified in task 12.2 (Conduct Project Team Workshop) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

355. PROJECT WORK PLAN

"**Project Work Plan**" shall have the meaning specified in in each of the Statements of Work of the Agreement.

356. PROJECT WORK PLAN MANAGEMENT DOCUMENT

"**Project Work Plan Management Document**" shall have the meaning specified in task 4.13 (Develop Project Control Document) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

357. PROJECT WORK PLAN OR PWP

"**Project Work Plan**" or "**PWP**" shall have the meaning specified in task 4.2 (Develop Project Work Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

358. PROPOSAL

"**Proposal**" means the proposal provided by Contractor in response to the RFP, as supplemented by all written correspondence of Contractor to clarify such proposal, attached collectively as Exhibit W (Contractor Proposal).

359. PROTECTED HEALTH INFORMATION

"**Protected Health Information**" shall have the meaning specified in Exhibit F (Business Associate Agreement).

360. PUBLIC RECORDS ACT

"**Public Records Act**" shall have the meaning specified in Section 32.26 (Public Records Act).

361. QOS

"**QoS**" shall have the meaning specified in Exhibit L (Recommended Configuration) of the Agreement.

362. QUALITY MANAGEMENT PLAN

"**Quality Management Plan**" shall have the meaning specified in task 4.1 (Develop Quality Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

363. QUALITY MANAGEMENT SYSTEM

"**Quality Management System**" or "**QMS**" shall have the meaning specified in Section 3.4 (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

364. RADIOLOGY INITIATION SESSION

"**Radiology Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Radiology Workgroup) of Exhibit A.9 (Radiology Statement of Work) of the Agreement.

365. RECEIVING PARTY

"**Receiving Party**" shall have the meaning specified in Section 19.2 (Confidential Information Defined).

366. RECOMMENDED CONFIGURATION

"**Recommended Configuration**" shall mean the computer platform(s), operating system(s), applications, interface engine, network infrastructure, connectivity, and workstation configurations recommended by Contractor for use with the Licensed Software, as specified in Exhibit O (Recommended Configuration). Solely with respect to the In-House Solution, "**Recommended Configuration**" shall have the meaning specified in Section 2 (In-House Solution) of Exhibit N (Additional Hosting Services Terms and Conditions) to the Agreement.

367. RECONCILIATION ADJUSTMENT

"**Reconciliation Adjustment**" shall have the meaning specified in Section 2.2.1 (Use Reconciliation) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

368. RED FLAGS

"**Red Flags**" shall have the meaning specified in Section 20.7 (Additional Procedures for the Identification of Possible Instances of Identity Theft).

369. REDUNDANT ARRAY OF INDEPENDENT DISK OR RAID

"**Redundant Array of Independent Disk**" or "**RAID**" shall have the meaning specified in Section 3.1(c) (Technical Environment) of Exhibit N.1 (Hosting Services.

370. REFRESH SERVICES

"**Refresh Services**" shall have the meaning specified in Section 3.6 (Hosting Hardware Refresh Services) of Exhibit N.1 (Hosting Services).

371. REGISTRATION AND EMPI INITIATION SESSION

"**Registration and EMPI Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Registration and EMPI Workgroup) of Exhibit A.4 (Registration and EMPI Statement of Work) of the Agreement.

372. REGRESSION TESTING

"**Regression Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

373. REGRESSION TESTING SUMMARY REPORTS

"**Regression Testing Summary Reports**" shall have the meaning specified in task 8.2 (Perform Regression Testing) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

374. REHABILITATION INITIATION SESSION

"**Rehabilitation Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Rehabilitation Workgroup) of Exhibit A.15 (Rehabilitation Statement of Work) of the Agreement.

375. RELEASE

"**Release**" shall mean a redistribution of Licensed Software that contains an aggregation of Updates, new features, new functionality, and/or other performance improvements that does not constitute a Version and is made Generally Available to clients.

376. RELEASE CONDITIONS

"**Release Conditions**" shall have the meaning specified in Section 4.1 (Escrow Agent and Release Conditions).

377. RELEASE SCHEDULE

"**Release Schedule**" shall have the meaning described in the Statements of Work of the Agreement.

378. REMEDIAL ACT(S)

"**Remedial Act(s)**" shall have the meaning specified in Section 23.2(b) (Intellectual Property Indemnification).

379. REMOTE HOSTING SERVICES PLAN

"**Remote Hosting Services Plan**" shall have the meaning specified in task 5 (Initiate and Perform Remote Hosting Services) of Exhibit A.3 (EHR Architecture and Hosting Services Statement of Work) of the Agreement.

380. REMOTE REPORT DISTRIBUTION OR RRD

"**Remote Report Distribution**" or "**RRD**" shall have the meaning specified in task 3.2 (Provide Application Monitoring and Management) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

381. REMOVABLE MEDIA

"**Removable Media**" shall have the meaning specified in Section 3 (Removable Media) of Exhibit K (Information Security Requirements).

382. RENEWAL SUPPORT TERM

"**Renewal Support Term**" shall have the meaning specified in Section 1.2 (Initial and Renewal Support Terms for Support Services).

383. REPLACEMENT PRODUCT

"**Replacement Product**" shall have the meaning specified in Section 6 (Continuous Licensed Software Support).

384. REQUIRED INSURANCE

"**Required Insurance**" shall have the meaning specified in Section 25.1 (General Insurance Provisions).

385. REQUIREMENTS FOR SYSTEMS, TOOLS, AND INTERFACES FOR IT SERVICE MANAGEMENT

"**Requirements for Systems, Tools, and Interfaces for IT Service Management**" shall have the meaning specified in task 2.5 (Define Requirements for Systems, Tools, and Interfaces for IT Service Management) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

386. RESOLVE

"**Resolve**" shall have the meaning specified in Section 4.2(c) (Support Request Service Levels) of Exhibit E (Service Levels and Performance Standards).

387. RESPOND

"**Respond**" shall have the meaning specified in Section 4.2(b) (Response Time Service Level) of Exhibit E (Service Levels and Performance Standards).

388. REVISION MANAGEMENT PLAN

"**Revision Management Plan**" shall have the meaning specified in task 3.7 (Develop Solution Readiness Framework) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

389. REVISIONS

"**Revisions**" shall mean Updates, Enhancements, Releases, Versions, and Displaced/Renamed Product.

390. RFP

"**RFP**" shall have the meaning specified in Recital F.

391. RISK ANALYSIS DOCUMENT

"**Risk Analysis Document**" shall have the meaning specified in task 2.1 (Confirm and Validate Data Sources) of Exhibit A.18 (Data Conversion Statement of Work.

392. RISK AND ISSUE MATRIX

"**Risk and Issue Matrix**" shall have the meaning specified in task 3.2 (Perform Data Collection (System Review Follow-Up)) of Exhibits A.4 through A.17 of the Agreement.

393. RISK AND OPPORTUNITIES DOCUMENTATION

"**Risk and Opportunities Documentation**" shall have the meaning specified in task 2.3 (Review Current DHS Workflows and Processes to Identify Risks and Opportunities) of Exhibits A.4 through A.17 of the Agreement.

394. RISK AND OPPORTUNITIES REPORT

"**Risk and Opportunities Report**" shall have the meaning specified in task 3.1 (Conduct System Review Session) of Exhibits A.4 through A.17 of the Agreement.

395. RISK MANAGEMENT PLAN

"**Risk Management Plan**" shall have the meaning specified in task 4.5 (Develop Risk Management Plan) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

396. RISK MATRIX

"**Risk Matrix**" shall have the meaning specified in task 4.1 (Build and Test Interfaces) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

397. SCHEDULE

"**Schedule**" shall have the meaning specified in the Preamble to the Agreement.

398. SCHEDULED DOWNTIME PLAN

"**Scheduled Downtime Plan**" shall have the meaning specified in task 3.7 (Develop Solution Readiness Framework) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

399. SCHEDULED UPTIME

"**Scheduled Uptime**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

400. SCHEDULING INITIATION SESSION

"**Scheduling Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Scheduling Workgroup) of Exhibit A.6 (Scheduling Statement of Work) of the Agreement.

401. SECURE SOCKET LAYER OR SSL

"**Secure Socket Layer**" or "**SSL**" shall have the meaning specified in Section 3.4(a) (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

402. SECURITY ASSESSMENT

"**Security Assessment**" shall have the meaning specified in task 2.1 (Document Security Objectives and Protection Requirements) of Exhibit A.19 (Security Statement of Work) of the Agreement.

403. SECURITY AUDITING INFRASTRUCTURE DOCUMENTATION

"**Security Auditing Infrastructure Documentation**" shall have the meaning specified in task 3.1 (Set Up and Configure Monitoring and Auditing Infrastructure and Processes) of Exhibit A.19 (Security Statement of Work) of the Agreement.

404. SECURITY AUDITING PROCESS DOCUMENTATION

"**Security Auditing Process Documentation**" shall have the meaning specified in task 3.1 (Set Up and Configure Monitoring and Auditing Infrastructure and Processes) of Exhibit A.19 (Security Statement of Work) of the Agreement.

405. SECURITY INCIDENT

"**Security Incident**" shall have the meaning given to such term in 45 C.F.R. § 164.304, but shall not include: (a) unsuccessful attempts to penetrate computer networks or servers maintained by Contractor and (b) immaterial incidents that occur on a routine basis, such as general "pinging" or "denial of service attacks."

406. SECURITY INITIATION SESSION

"**Security Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Security Workgroup) of Exhibit A.19 (Security Statement of Work) of the Agreement.

407. SECURITY MONITORING AND AUDITING TOOLS

"**Security Monitoring and Auditing Tools**" shall have the meaning specified in task 3.2 (Deploy Security Monitoring and Auditing Tools) of Exhibit A.19 (Security Statement of Work) of the Agreement.

408. SECURITY MONITORING INFRASTRUCTURE DOCUMENTATION

"**Security Monitoring Infrastructure Documentation**" shall have the meaning specified in task 3.1 (Set Up and Configure Monitoring and Auditing Infrastructure and Processes) of Exhibit A.19 (Security Statement of Work) of the Agreement.

409. SECURITY MONITORING PROCESS DOCUMENTATION

"**Security Monitoring Process Documentation**" shall have the meaning specified in task 3.1 (Set Up and Configure Monitoring and Auditing Infrastructure and Processes) of Exhibit A.19 (Security Statement of Work) of the Agreement.

410. SECURITY PROTECTION REQUIREMENTS DOCUMENT

"**Security Protection Requirements Document**" shall have the meaning specified in task 2.1 (Document Security Objectives and Protection Requirements) of Exhibit A.19 (Security Statement of Work) of the Agreement.

411. SECURITY STRATEGY

"**Security Strategy**" shall have the meaning specified in task 10 (Security Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

412. SERVER

"**Server**" shall have the meaning specified in Section 1.1 (General Requirements) of Exhibit E (Service Levels and Performance Standards).

413. SERVICE INTERDEPENDENCY

"**Service Interdependency**" shall have the meaning specified in Section 30.2 (Service Interdependencies).

414. SERVICE LEVEL CREDIT

"**Service Level Credit**" shall have the meaning specified in Section 5.2 (Service Level Credits) of Exhibit E (Service Levels and Performance Standards).

415. SERVICE LEVEL FAILURES

"**Service Level Failures**" shall have the meaning specified in Section 5.1 (Service Level Failures) of Exhibit E (Service Levels and Performance Standards).

416. SERVICE LEVEL REPORTS

"**Service Level Reports**" shall have the meaning specified in task 4.3 (Conduct Service Level Monitoring and Reporting) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

417. SERVICE LEVELS

"**Service Levels**" shall have the meaning specified in Section 11 (Service Levels).

418. SERVICE REQUEST TRACKING SYSTEM

"**Service Request Tracking System**" shall have the meaning specified in task 4.4 (Respond to Support Service Requests) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

419. SERVICES

"**Services**" shall mean, collectively, all functions, responsibilities, tasks, subtasks, Deliverables, and other services: (a) identified in the Specifications; (b) identified in this Agreement as being Contractor's responsibility; and (c) otherwise necessary to comply with the terms of this Agreement. Without increasing the scope of the Services, if any component task, subtask,

service, or function is: (i) an inherent or necessary part of the Services defined in subparts (a), (b), or (c) of this Section; or (ii) a customary part of the Services defined in subparts (a), (b), or (c) of this Section, and not in conflict with Contractor's established methods of providing services; and, as to a service(s) within either subpart (i) and (ii) of this sentence above, is not specifically described in this Agreement, then such service or function shall be deemed to be part of the Services. While County utilizes Hosting Services, any hardware and/or software provided to County by Contractor as part of the Hosting Services pursuant to this Agreement shall be deemed part of the Services. There are several subsets of the Services, specifically "Implementation Services," "Hosting Services," and "Support Services" that are included within this definition of "Services," even though they are sometimes referenced by the Service grouping name (e.g., "Implementation Services," "Hosting Services," and "Support Services"). Each of these Service groupings includes both the broad definition of Services above, and the specific Services associated with the Service grouping and described in Exhibits and related documents incorporated into the definition of that Service grouping.

420. SHERRIFF JAIL HEALTH INFORMATION SYSTEM OR JHIS

"**Sherriff Jail Health Information System**" or "**JHIS**" shall have the meaning specified in Exhibit EE (Interoperability Functionality) of the Agreement.

421. SOLUTION AND TOOLS INTRODUCTION WORKSHOP

"**Solution and Tools Introduction Workshop**" shall have the meaning specified in task 12.5 (Conduct Solution and Tools Introduction Workshop) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

422. SOLUTION BUILD AND MAINTAIN COURSE

"**Solution Build and Maintain Course**" shall have the meaning specified in task 12.4 (Conduct Solution Build and Maintain Course) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

423. SOLUTION READINESS ASSESSMENT

"**Solution Readiness Assessment**" shall have the meaning specified in task 4 (Conduct Readiness Assessment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

424. SOLUTION READINESS FRAMEWORK

"**Solution Readiness Framework**" shall have the meaning specified in task 3.7 (Develop Solution Readiness Framework) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

425. SOURCE MATERIAL

"**Source Material**" shall mean, with respect to the Contractor-developed Licensed Software and Work Product, the source code of such software and all related compiler command files, build scripts, scripts relating to the operation and maintenance of such application, application programming interface ("**API**"), graphical user interface ("**GUI**"), object libraries, all relevant instructions on building the object code of such application, and all documentation relating to the foregoing, such that collectively the foregoing will be sufficient to enable a person possessing reasonable skill and expertise in computer software and information technology to

build, load, and operate the machine-executable object code of such application; to maintain and support such application; and to effectively use all functions and features of such software. If any portion of the Source Material is encrypted, Contractor shall include the decryption tools and decryption keys with the Source Material.

426. SPECIFICATIONS

"**Specifications**" shall mean any or all of the following, as applicable:

(a) All specifications, requirements, and standards specified in Exhibit A.2 (Licensed Software Requirements) and Exhibit A (Statement of Work).

(b) All Performance Requirements and standards specified in this Agreement, including, but not limited to, requirements for Licensed Software availability and Licensed Software response time identified in Exhibit E (Service Levels). The requirements for Licensed Software availability and Licensed Software response time identified in Exhibit E (Service Levels) shall only be included in this definition until Twelve (12) months after the date of Productive Use of the last Cluster for which the Licensed Software is planned to be implemented under this Agreement.

(c) The Documentation, to the extent not inconsistent with any of the foregoing in this definition.

(d) All specifications provided or made available by Contractor in writing under this Agreement, but only to the extent: (i) not inconsistent with any of the foregoing in this Section; and (ii) acceptable to County.

(e) All Existing System and Hardware requirements and certifications provided by Contractor in accordance with this Agreement with respect to the Licensed Software, including the Recommended Configuration.

(f) The Proposal, but only to the extent: (i) not inconsistent with any of the foregoing in this Section; and (ii) acceptable to County.

(g) All written and/or electronic materials furnished or made available by or through Contractor regarding the Licensed Software, including functionality, features, capacity, availability, response times, accuracy, or any other performance or other Licensed Software criteria or any element of the Licensed Software or any Licensed Software component.

(h) The Business Objectives and Acceptance Criteria.

(i) All Hosting Services requirements and standards set forth in Exhibit N (Additional Hosting Services Terms and Conditions) and related Exhibits.

427. STAKEHOLDER ANALYSIS

"**Stakeholder Analysis**" shall have the meaning specified in task 3.1 (Identify Stakeholders) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

428. STANDARDS FOR ATTESTATION ENGAGEMENTS OR SSAE

"**Standards for Attestation Engagements**" or "**SSAE**" shall have the meaning specified in Section 3.3(a) (Physical Security Environment) of Exhibit N.1 (Hosting Services).

429. STATE

"**State**" shall mean the State of California.

430. STATEMENT OF WORK

"**Statement of Work**" shall have the meaning specified in Section 9.1 (Services).

431. STATUS MEETING

"**Status Meeting**" shall have the meaning specified in Section 10.2.1 (Reports).

432. STATUS REPORT

"**Status Report**" shall have the meaning specified in Section 10.2.1 (Reports).

433. STORAGE AREA NETWORK OR SAN

"**Storage Area Network**" or "**SAN**" shall have the meaning specified in Section 3.1(c) (Technical Environment) of Exhibit N.1 (Hosting Services).

434. STRATEGIC ASSESSMENT

"**Strategic Assessment**" shall have the meaning specified in task 6 (Develop Strategic Assessment and Organizational Change Management Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

435. STRATEGIC ASSESSMENT REPORT

"**Strategic Assessment Report**" shall have the meaning specified in task 6.1 (Conduct Strategic Assessment) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

436. STRATEGIC ASSESSMENT SESSION

"**Strategic Assessment Session**" shall have the meaning specified in task 6.1 (Conduct Strategic Assessment) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

437. SUBJECT MATTER EXPERTS OR SMES

"**Subject Matter Experts**" or "**SMEs**" shall have the meaning specified in in each of the Statements of Work of the Agreement.

438. SUCCESSOR EVENT

"**Successor Event**" shall have the meaning specified in Section 6 (Continuous Licensed Software Support).

439. SUPER USER

"**Super User**" shall have the meaning specified in task7.1 (Conduct Train-the-Trainer and Super User Training) of Exhibit A.22 (Training and Knowledge Transfer) of the Agreement.

440. SUPER USER TRAINING

"**Super User Training**" shall have the meaning specified in task 7.1 (Conduct Train-the-Trainer and Super User Training) of Exhibit A.22 (Training and Knowledge Transfer) of the Agreement.

441. SUPPORT REQUEST

"**Support Request**" shall have the meaning specified in Section 4.2(a) (Support Request Service Levels) of Exhibit E (Service Levels and Performance Standards).

442. SUPPORT REQUEST TRACKING SYSTEM OR SRTS

"**Support Request Tracking System**" or "**SRTS**" shall mean the automated support request tracking system as described in Section 4.1 (Service Request Tracking System) of Exhibit E (Service Levels And Performance Standards).

443. SUPPORT SERVICES

"**Support Services**" shall mean the Services as further specified in Section 9.7 (Support Services).

444. SUPPORT SERVICES FEE(S)

"**Support Services Fee(s)**" shall mean fees to be paid by County to Contractor for Support Services, as specified in Exhibit C (Fees; Contractor Professional Services Rates).

445. SUPPORT SERVICES, MAINTENANCE, AND OPERATIONS INITIATION SESSION

"**Support Services, Maintenance, and Operations Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Support Services, Maintenance, and Operations Workgroup) of Exhibit A.24 (Support Services, Maintenance, and Operations Statement of Work) of the Agreement.

446. SUPPORT TERM

"**Support Term**" shall have the meaning specified in Section 1.2 (Initial and Renewal Support Terms for Support Services).

447. SYSTEM BACKUP/RESTORE PLAN

"**System Backup/Restore Plan**" shall have the meaning specified in task 3.7 (Develop Solution Readiness Framework) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

448. SYSTEM PERFORMANCE MONITORING PLAN

"**System Performance Monitoring Plan**" shall have the meaning specified in task 3.7 (Develop Solution Readiness Framework) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

449. SYSTEM REVIEW SESSION

"**System Review Session**" shall have the meaning specified in task 3.1 (Conduct System Review Session) of Exhibits A.4 through A.17 of the Agreement.

450. SYSTEM SECURITY PLAN

"**System Security Plan**" shall have the meaning specified in task 2.2 (Develop System Security Plan) of Exhibit A.19 (Security Statement of Work) of the Agreement.

451. SYSTEM TESTING

"**System Testing**" shall have the meaning specified in task 4.1 (Build and Test Interfaces) of Exhibit A.20 (Interfaces Statement of Work) of the Agreement.

452. SYSTEM VALIDATION SESSION

"**System Validation Session**" shall have the meaning specified in task 6.1 (System Validation Session) of Exhibits A.4 through A.17 of the Agreement.

453. TB

"**TB**" shall have the meaning specified in Section 2.2.2 (Baseline Use Metrics) of Exhibit C (Fees; Contractor Professional Services Rates) to the Agreement.

454. TECHNICAL ASSESSMENT

"**Technical Assessment**" shall have the meaning specified in task 5.1 (Conduct Technical Assessment) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

455. TECHNICAL READINESS ASSESSMENT

"**Technical Readiness Assessment**" shall have the meaning specified in task 4.1 (Conduct Technical Readiness Assessment) of Exhibit A.23 (Deployment Statement of Work) of the Agreement.

456. TECHNOLOGY STRATEGY

"**Technology Strategy**" shall have the meaning specified in task 5 (Develop Technology Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

457. TERM

"**Term**" shall have the meaning specified in Section 1.1 (Term).

458. TERMINATION TRANSITION PLAN

"**Termination Transition Plan**" shall have the meaning specified in Section 29.8 (Termination Transition Services).

459. TEST PLAN

"**Test Plan**" shall have the meaning specified in task 2 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

460. TESTING STRATEGY

"**Testing Strategy**" shall have the meaning specified in task 9 (Develop Testing Strategy) of Exhibit A.2 (Project Initiation Statement of Work) of the Agreement.

461. THIRD-PARTY PRODUCTS

"**Third-Party Products**" shall mean all software and content licensed, leased, or otherwise obtained by Contractor from a third-party, and used with the Licensed Software or used for the performance of the Services and which is expressly identified in the Third-Party Products section of Exhibit B (EHR System Software Components).

462. THIRD-PARTY PRODUCTS WITH INDEPENDENT CONDITIONS

"**Third-Party Products With Independent Conditions**" shall have the meaning specified in Section 7 (Third-Party Products With Independent Conditions).

463. TIME/DATE COMPLIANT

"**Time/Date Compliant**" means such products and services will correctly store, represent, calculate, sort, and process all (a) dates, including single and multi-century formulas and leap year calculations; and (b) times in all relevant time zones, including any local, state, or federal adjustments to Daylight Saving Time (e.g., changes made pursuant to The Energy Policy Act of 2005).

464. TRAINING

"**Training**" shall mean training relating to the Licensed Software to be provided by Contractor pursuant to this Agreement, including training County may acquire in the future as part of Professional Services.

465. TRAINING AND KNOWLEDGE TRANSFER INITIATION SESSION

"**Training and Knowledge Transfer Initiation Session**" shall have the meaning specified in task 1.2 (Conduct Initiation Session for Training and Knowledge Transfer Workgroup) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

466. TRAINING AND KNOWLEDGE TRANSFER SCHEDULE

"**Training and Knowledge Transfer Schedule**" shall have the meaning specified in task 5.1 (Develop Training and Knowledge Transfer Schedule) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

467. TRAINING AND SUPPORT MATERIALS

"**Training and Support Materials**" shall have the meaning specified in task 4 (Develop Training and Support Materials) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

468. TRAINING DEVELOPMENT STANDARDS

"**Training Development Standards**" shall have the meaning specified in task 2.5 (Develop Training Development Standards) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

469. TRAINING ENVIRONMENT PLAN

"**Training Environment Plan**" shall have the meaning specified in task 3.1 (Develop Plan for the Training Environment) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

470. TRAINING ENVIRONMENT SESSION

"**Training Environment Session**" shall have the meaning specified in task 3.1 (Develop Plan for the Training Environment) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

471. TRAIN-THE-TRAINER TRAINING

"**Train-the-Trainer Training**" shall have the meaning specified in task 7 (Conduct Train-the-Trainer and Super User Training) of Exhibit A.22 (Training and Knowledge Transfer Statement of Work) of the Agreement.

472. TRIPLE DATA ENCRYPTION STANDARD OR 3DES

"**Triple Data Encryption Standard**" or "**3DES**"" shall have the meaning specified in Section 3.4(a) (Hosting Environment Security) of Exhibit N.1 (Hosting Services).

473. UCITA

"**UCITA**" shall have the meaning specified in Section 32.2 (UCITA; Self-Help Remedies).

474. UNINTERRUPTIBLE POWER SUPPLY OR UPS

"**Uninterruptible Power Supply**" or "**UPS**" shall have the meaning specified in Section 3.2(a) (Physical Environment) of Exhibit N.1 (Hosting Services).

475. UNIT AND SYSTEM TEST(ING)

"**Unit and System Test(ing)**" shall have the meaning specified in task 7 (Complete Build of Clinical Documentation and Results and Conduct System and Unit Testing) of Exhibits A.4 through A.17 of the Agreement.

476. UNIT TESTING

"**Unit Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work).

477. UNPLANNED DOWNTIME

"**Unplanned Downtime**" shall have the meaning specified in Section 4.3 (Availability Service Level) of Exhibit E (Service Levels and Performance Standards).

478. UPDATE

"**Update**" shall mean a bug fix, patch, or redistribution of the Licensed Software that corrects an error as well as addresses common functional and performance issues, including Error Corrections.

479. USB

"**USB**" shall have the meaning specified in Section 20.4 (Use of Personal Portable Devices).

480. USE

"**Use**," as it applies to Licensed Software and Third-Party Products, shall have the meaning specified in Section 3.1.1 (Scope of License). "**Use**," as it applies to the In-House Solution, shall have the meaning specified in Section 2 (In-House Solution) of Exhibit N (Additional Hosting Services Terms and Conditions) to the Agreement.

481. USER

"**User**" shall have the meaning specified in Section 3.1.1 (Scope of License).

482. USER ACCEPTANCE TESTING

"**User Acceptance Testing**" shall have the meaning specified in task 2.1 (Develop Test Plan) of Exhibit A.21 (EHR System Testing Statement of Work) of the Agreement.

483. USE RECONCILIATION

"**Use Reconciliation**" shall mean the process described in Section 2.2.1 of Exhibit C (Fees; Contractor Professional Services Rates) to assess whether there are additional infrastructure costs to Contractor that arise in connection with expanded use or consumption by County of the EHR System and, if so, what the appropriate financial adjustment arising from such expanded use or consumption will be.

484. USER ROLE AND AUTHORIZATION TEST PLAN

"**User Role and Authorization Test Plan**" shall have the meaning specified in task 4.2 (Implement User Roles and Authorizations) of Exhibit A.19 (Security Statement of Work) of the Agreement.

485. VENUES

"**Venues**" shall mean all County settings of care, or service delivery. For illustration, examples include inpatient ward, outpatient/ambulatory clinic, in-home, nursing home, jail ward, recuperative care, emergency department, operating room, procedure area, recovery room/post-operative care unit, intensive care unit, and pre-hospital.

486. VERSION

"**Version**" shall mean a redistribution of Licensed Software that Contractor makes Generally Available and that contains an aggregation of Releases or Updates, or significant new (i) features, (ii) functionality, and/or (iii) other performance improvements, and is accompanied by a change in the reference to the Licensed Software, such as a change in the number to the left of the period in the version numbering format X.XX or a change to the name of the software.

487. VPN

"**VPN**" shall have the meaning specified in Section 20.3 (Contractor Systems).

488. WARRANTY PERIOD

"**Warranty Period**" shall have the meaning specified in Section 17.1.3 (Conformance to Specifications).

489. WEB BASED TRAINING OR WBT

"**Web Based Training**" or "**WBT**" shall have the meaning specified in each of the Statements of Work of the Agreement.

490. WORKFLOW LOCALIZATION DOCUMENTS

"**Workflow Localization Documents**" shall have the meaning specified in task 4.3 (Conduct Workflow Localization) of Exhibits A.4 through A.17 of the Agreement.

491. WORKFLOW LOCALIZATION SESSION

"**Workflow Localization Session**" shall have the meaning specified in task 4.3 (Conduct Workflow Localization) of Exhibits A.4 through A.17 of the Agreement.

492. WORK PRODUCT

"**Work Product**" shall have the meaning specified in Section 18.1 (Work Product and Background Intellectual Property).

Exhibit H (EHR Program Strategy)

to the

Electronic Health Records System and Services Agreement

EXHIBIT H

EHR PROGRAM STRATEGY

1. BACKGROUND

The Los Angeles Department of Health Services ("LA DHS") has embarked on an effort to replace its current clinical information system – the Quadramed Affinity suite – with a new Electronic Health Record (EHR) system. As part of this effort LA DHS is developing an EHR Strategic Plan which will enable the organization to successfully select, implement and realize benefits from an EHR in support of the overall clinical and business strategy.

The strategy document will also be used to broadly communicate the opportunities and challenges that face LA DHS. Clinical and business leadership will be able to use the agreements and direction documented here to drive change and achieve the expectations of the EHR project.

The LA DHS EHR Strategy has been created and endorsed by the EHR Executive Steering Committee which is comprised of Clinical and Administrative Leaders from HSA, the Hospitals, ambulatory care, as well as representatives from County CIO, CEO and County Counsel.

2. KEY DRIVERS FOR THE LA DHS ELECTRONIC HEALTH RECORDS PROGRAM

The key drivers that push LA DHS to initiate the EHR project at this time are the following:

- **Improve patient safety and the quality and efficiency of care by**
  - Providing clinicians with access to clinical data and real time decision support at the point of care – the integrated EHR solution will facilitate consistent access to complete patient information across the continuum of care and across the LA DHS distributed environment with multiple care settings and hospitals.
  - Reducing unnecessary practice variation – comprehensive workflow and rule engines will provide support for the development and management of standardized clinical content development (such as order sets or intelligent templates).

- **Support Outpatient Care Restructuring towards Health Care Reform** – LA DHS is in the process of restructuring its current approach to the oversight of Outpatient Care, including reorganizing all primary care and outpatient specialty services delivered within DHS under a cohesive organization. This will be the basis for an integrated, managed delivery system and DHS will provide the new outpatient organization with the leadership and the infrastructure elements needed to organize DHS's outpatient services to most effectively participate in managed care.

- **Improve LA DHS' position in an increasingly competitive environment** – Health Care Reform will provide patients with more choices when it comes to selecting their health care providers. LA DHS will face increased competition from commercial for-profit and not-for-profit care providers. By implementing a fully integrated EHR, LA DHS can improve its position in a more competitive environment. Failing to implement an EHR and standardize the clinical processes may severely disrupt the ability of DHS to compete in the new Health care environment.

- **Meet meaningful use criteria and comply with ARRA requirements to avoid penalties** – The current Affinity suite does not enable LA DHS to meet Meaningful Use criteria and cannot be upgraded to do so.

- **Meet a technical need to replace the current solution** – Quadramed, the vendor of the Affinity system currently in use, has declared that it will cease to support the clinical modules of Affinity within the next two years.

3. VISION FOR THE LA DHS ELECTRONIC HEALTH RECORDS PROGRAM

The EHR Executive Steering Committee has agreed on the following vision statement for the LA DHS EHR Program:

"To procure, deploy, and sustain a uniform, standardized and fully integrated EHR solution that is implemented consistently across care settings, with standardized associated workflow processes and a single, unified data structure."

In this vision, the individual terms are to be understood as follows:

- **Sustain –** The system will require ongoing investment in software, personnel, and infrastructure to provide the support and enhancement necessary to achieve ongoing benefits and continuous availability of EHR functionality
- **Uniform and standardized** – There will be one enterprise-wide solution across all facilities within DHS
- **Fully integrated EHR solution** – The system will be fully integrated to provide clinical decision support and allow clinicians to access and act on all clinical data across all ancillaries, physical locations, and care settings
- **Implemented consistently** – The EHR will be implemented and configured in a virtually identical manner in all DHS facilities.
- **Across all care settings** – Includes In-patient (IP) and Outpatient (OP), Emergency Department (ED), Operating Room (OR), Intensive Care Unit (ICU)
- **Standardized associated workflow processes** – Clinical pathways and care plans are the same across all facilities
- **Single, unified data structure** – One single integrated medical record per patient across the enterprise

The initial deployment of the EHR will not include all aspects of the vision (e.g. it is likely to initially support interfaces to external ancillary systems such as Registration, Laboratory, ED, and ICU). However, the LA DHS EHR Strategy includes an explicit intention and plan to migrate over a 5 year timeframe to the complete standardized, integrated, enterprise-wide vision.*[1]

The EHR vision will be attained with the **wide engagement of DHS clinical stakeholders** and the **ongoing unwavering support of the LA County Board of Supervisors**.

* The description of the deployment strategy in the EHR Program Strategy has been modified and the current deployment strategy is reflected in the Agreement and Statements of Work.

Exhibit I (Contractor Quality Controls)

to the

Electronic Health Records System and Services Agreement

Proprietary and Confidential

Proprietary and Confidential

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Exhibit J (Contractor Key Employees)

to the

Electronic Health Records System and Services Agreement

EXHIBIT J
CONTRACTOR KEY EMPLOYEES

The following table sets forth the Contractor's Key Employees as of the Effective Date and pursuant to Section 10.1.4 (Contractor Key Employees) of the Agreement. Except as provided in this Exhibit, capitalized terms shall have the meanings set forth in the body of the Agreement and Exhibit G (Glossary).

Key Employee Name	Project Title	Cerner Title	Full Time	On Site	Continuity Commitment	Duration of the Role	Number of Resources
Lisa Lee	Project Director	Senior Engagement Leader	Yes	Yes	36 months	Through the Term, and Upon Final Acceptance of the EHR System this position will be converted to Contractor's Vice Present, General Manager	1
[To be Inserted]	Project Director	Client Results Executive	No	Yes	36 months	Through the Term	1
Katie Daugherty	Project Manager	Senior Engagement Leader	Yes	Yes	36 months	Through the Final Acceptance of the EHR System	1
[To be Inserted]	Practice Manager	Practice Manager	No	No	No	Final Acceptance of the EHR System	1
Debbie Cochran	Integration Architect	Integration Architect	Yes	Yes	36 months	Final Acceptance of the EHR System	1
[To be Inserted]	Healthcare Executive	Healthcare Executive	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	1
[To be Inserted]	Clinical Strategist	Clinical Strategist	Yes	Yes	36 months	Final Acceptance of the EHR System	1

Key Employee Name	Project Title	Cerner Title	Full Time	On Site	Continuity Commitment	Duration of the Role	Number of Resources
[To be Inserted]	Technical Engagement Leader	Technical Engagement Leader	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	2
[To be Inserted]	Hosting Technical Engagement Leader	CernerWorks Technical Engagement Leader	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	1
[To be Inserted]	Hosting System Engineer	CernerWorks System Engineer	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	1
[To be Inserted]	Solution Architect	Solution Architect	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	30
[To be Inserted]	SOW Delivery Consultant (for each Statement of Work)	Delivery Consultant	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	30
[To be Inserted]	Learning Consultant	Learning Consultant	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	1
[To be Inserted]	Interface Architect	Interface Architect	No	Yes, per Project Work Plan	24 months	Final Acceptance of the EHR System	1

Exhibit K (Information Security Requirements)

to the

Electronic Health Records System and Services Agreement

EXHIBIT K

INFORMATION SECURITY REQUIREMENTS

This Exhibit K (Information Security Requirements) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. This Exhibit K (Information Security Requirements) sets forth information security procedures to be established by Contractor before the Effective Date of the Agreement and maintained throughout the Term of the Agreement. These procedures are in addition to the requirements of the Agreement and the Business Associate Agreement between the Parties. They present a minimum standard only. However, it is Contractor's sole obligation to: (i) implement appropriate measures to secure its systems and data, including Personal Data, Protected Health Information, and County Confidential Information, against internal and external threats and risks; and (ii) continuously review and revise those measures to address ongoing threats and risks. Failure to comply with the minimum standards set forth in this Exhibit K (Information Security Requirements) will constitute a material, non-curable breach of the Agreement by Contractor, entitling County, in addition to and cumulative of all other remedies available to it at law, in equity, or under the Agreement, to immediately terminate the Agreement. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. **Security Policy**. Contractor shall establish and maintain a formal, documented, mandated, company-wide information security program, including security policies, standards and procedures (collectively "**Information Security Policy**"). The Information Security Policy will be communicated to all Contractor Personnel and subcontractors in a relevant, accessible, and understandable form and will be regularly reviewed and evaluated to ensure its operational effectiveness, compliance with all applicable laws and regulations, and to address new threats and risks.

2. **Personnel and Contractor Protections**. Contractor shall screen and conduct background checks on all Contractor Personnel and subcontractors contacting County Confidential Information, including Personal Data and Protected Health Information, for potential security risks and require all employees, contractors, and subcontractors to sign an appropriate written confidentiality/non-disclosure agreement. All agreements with third-parties involving access to Contractor's systems and data, including all outsourcing arrangements and maintenance and support agreements (including facilities maintenance), shall specifically address security risks, controls, and procedures for information systems. Contractor shall supply each of its Contractor Personnel and subcontractors with appropriate, ongoing training regarding information security procedures, risks, and threats. Contractor shall have an established set of procedures to ensure Contractor Personnel and subcontractors promptly report actual and/or suspected breaches of security.

3. **Removable Media**. Except in the context of Contractor's routine back-ups or as otherwise specifically authorized by County in writing, Contractor shall institute strict physical and logical security controls to prevent transfer of Personal Data and Protected Health Information to any form of Removable Media. For purposes of this Exhibit K (Information Security Requirements), "**Removable Media**" means portable or removable hard disks, floppy disks, USB memory drives,

zip disks, optical disks, CDs, DVDs, digital film, memory cards (e.g., Secure Digital (SD), Memory Sticks (MS), CompactFlash (CF), SmartMedia (SM), MultiMediaCard (MMC), and xD-Picture Card (xD)), magnetic tape, and all other removable data storage media.

4. **Storage, Transmission, and Destruction of Protected Health Information.** All Protected Health Information shall be rendered unusable, unreadable, or indecipherable to unauthorized individuals in accordance with HIPAA, as amended and supplemented by the HITECH Act. Without limiting the generality of the foregoing, Contractor will encrypt all electronic Protected Health Information (stored and during transmission) in accordance with HIPAA and the HITECH Act, as implemented by the U.S. Department of Health and Human Services. If Protected Health Information is no longer required to be retained by Contractor under the Agreement and applicable law, Contractor shall destroy such Protected Health Information by: (a) shredding or otherwise destroying paper, film, or other hard copy media so that the Protected Health Information cannot be read or otherwise cannot be reconstructed; and (b) clearing, purging, or destroying electronic media containing Protected Health Information consistent with NIST Special Publication 800-88, Guidelines for Media Sanitization[1] such that the Protected Health Information cannot be retrieved.

5. **Data Control; Media Disposal and Servicing**. Subject to and without limiting the requirements under Section 4 (Storage, Transmission and Destruction of Protected Health Information), Personal Data, Protected Health Information, and County Confidential Information: (i) may only be made available and accessible to those parties explicitly authorized under the Agreement or otherwise expressly Approved by County in writing; (ii) if transferred across the Internet, any wireless network (e.g., cellular, 802.11x, or similar technology), or other public or shared networks, must be protected using appropriate encryption technology as designated or Approved by County in writing; and (iii) if transferred using Removable Media (as defined above) must be sent via a bonded courier or protected using encryption technology designated or Approved by County in writing. The foregoing requirements shall apply to back-up data stored by Contractor at off-site facilities. In the event any hardware, storage media, or Removable Media must be disposed of or sent off-site for servicing, Contractor shall ensure all County Confidential Information, including Personal Data and Protected Health Information, has been cleared, purged, or scrubbed from such hardware and/or media using industry best practices (e.g., NIST Special Publication 800-88, Guidelines for Media Sanitization[2]).

6. **Hardware Return**. Upon termination or expiration of the Agreement or at any time upon County's request, Contractor will return all hardware, if any, provided by County containing Personal Data, Protected Health Information, or County Confidential Information to County. The Personal Data, Protected Health Information, and County Confidential Information shall not be removed or altered in any way. The hardware should be physically sealed and returned via a bonded courier or as otherwise directed by County. In the event the hardware is owned by Contractor or a third-party, a notarized statement, detailing the destruction method used and the data sets involved, the date of destruction, and the company or individual who performed the destruction will be sent to a designated County security representative within fifteen (15) days of termination or expiration of the Agreement or at any time upon County's request.

[1] Available at http://www.csrc.nist.gov/

[2] Available at http://www.csrc.nist.gov/

Contractor's destruction or erasure of Personal Data and Protected Health Information pursuant to this Section shall be in compliance with industry Best Practices (*e.g.*, NIST Special Publication 800-88, Guidelines for Media Sanitization[3]).

7. **Physical and Environmental Security**. Contractor facilities that process Personal Data, Protected Health Information, or County Confidential Information will be housed in secure areas and protected by perimeter security such as barrier access controls (e.g., the use of guards and entry badges) that provide a physically secure environment from unauthorized access, damage, and interference.

8. **Communications and Operational Management**. Contractor shall: (i) monitor and manage all of its information processing facilities, including, without limitation, implementing operational procedures, change management and incident response procedures; and (ii) deploy adequate anti-viral software and adequate back-up facilities to ensure essential business information can be promptly recovered in the event of a disaster or media failure; and (iii) ensure its operating procedures will be adequately documented and designed to protect information, computer media, and data from theft and unauthorized access.

9. **Access Control**. Contractor shall implement formal procedures to control access to its systems, services, and data, including, but not limited to, user account management procedures and the following controls:

    - Network access to both internal and external networked services shall be controlled, including, but not limited to, the use of properly configured firewalls;

    - Operating systems will be used to enforce access controls to computer resources including, but not limited to, authentication, authorization, and event logging;

    - Applications will include access control to limit user access to information and application system functions; and

    - All systems will be monitored to detect deviation from access control policies and identify suspicious activity. Contractor shall record, review and act upon all events in accordance with incident response policies set forth below.

10. Contractor will promptly notify (but in no event more than twenty-four (24) hours after the detection of a Security Incident) the designated County security contact by telephone and subsequently via written letter of any potential or actual security attacks or Security Incidents. The notice shall include the approximate date and time of the occurrence and a summary of the relevant facts, including a description of measures being taken to address the occurrence. A Security Incident includes instances in which internal personnel access systems in excess of their user rights or use the systems inappropriately. In addition, Contractor will provide a monthly report of all Security Incidents noting the actions taken. This will be provided via a written letter to the County security representative on or before the first (1st) week of each calendar month.

[3] Available at http://www.csrc.nist.gov/

County or its third-party designee may, but is not obligated, perform audits and security tests of Contractor's environment that may include, but are not limited to, interviews of relevant personnel, review of documentation, or technical inspection of systems, as they relate to the receipt, maintenance, use, retention, and authorized destruction of Personal Data, Protected Health Information, and County Confidential Information. In the event County desires to conduct an unannounced penetration test, County shall provide contemporaneous notice to Contractor's Vice President of Audit, or such equivalent position. Any of County's regulators shall have the same right upon request. Contractor shall provide all information reasonably requested by County in connection with any such audits and shall provide reasonable access and assistance to County or its regulators upon request. Contractor agrees to comply with all reasonable recommendations that result from such inspections, tests, and audits within reasonable timeframes. County reserves the right to view, upon request, any original security reports that Contractor has undertaken on its behalf to assess Contractor's own network security. If requested, copies of these reports will be sent via bonded courier to the County security contact. Contractor will notify County of any new assessments.

Exhibit L (Recommended Configuration)

to the

Electronic Health Records System and Services Agreement

RECOMMENDED CONFIGURATION

The purpose of this Exhibit is to define Contractor's Recommended Configuration for the County's network infrastructure and connectivity/bandwidth so that individually and collectively the network infrastructure and connectivity/bandwidth are sufficient in size, capacity, and processing capability for the use by the County of the EHR System in accordance with this Agreement during the Configuration Warranty Period set forth in Section 17.1.9 (Configuration Warranty) of the Agreement.

WAN Network Infrastructure.

During the term of the Configuration Warranty Period, County shall provide the minimum bandwidth set forth below from the applicable edge device demarcation where the Contractor Hosting Services circuits are terminated to the locations listed below.

	Grand Total incl clinics
	Total kbps
Harbor UCLA	14,210
MLK MACC	2,946
LAC_USC	43,266
High Desert	1,662
Olive View	10,620
Rancho Los Amigos	5,034

Connectivity: Basic LAN Network Infrastructure.

During the Configuration Warranty Period, County shall maintain the LAN and WAN in a manner that is consistent with the LAN and WAN attributes in place when Contractor performed its review in October 2012. County must also actively manage and prioritize its LAN/WAN network traffic.

If County does not actively manage and prioritize its LAN/WAN network traffic and that is the reason the EHR System does not perform as set forth in Section 17.1.9 (Configuration Warranty) of the Agreement, prior to seeking a remedy under Section 17.1.9 (Configuration Warranty), County must implement additional measures to manage and prioritize its LAN/WAN network traffic (e.g. Quality of Service ("**QoS**") disciplines and tools) and the failure must occur again after those measures are implemented.

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Exhibit M (Interfaces)

to the

Electronic Health Records System and Services Agreement

EXHIBIT M

INTERFACES

This Exhibit M (Interfaces) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. This Exhibit M (Interfaces) identifies systems in use at County as of the Effective Date and is to be used by Contractor in developing its Current State Assessment of Interfaces pursuant to Exhibit A.20 (Interfaces Statement of Work). Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
1	Patient Care	3M		3M Encoder		HIM DRG encoder			LACUSC			
2	Patient Care	3N		3N		Disaster Notification System				HUCLA		
3	Patient Care	4PatientCare			Appointment Reminder Calls				LACUSC			
4	Patient Care	ACMS	CMS	CaseWatch	CMS	Children Medical Services				HUCLA		
5	Patient Care	ACMS	HIV	CaseWatch	HIV	Tracking HIV patients	HD	OVUCLA		HUCLA	MLK	
6	Patient Care	ACMS	STD	CaseWatch	STD					HUCLA		
7	Patient Care	Adobe		JETFORMS	IDC	Encounter Form Development on Demand Custom Reports Development	HD	OVUCLA	LACUSC	HUCLA	MLK	
8	Patient Care	ALARIS			PUMPS	SA			LACUSC			
9	Patient Care	Allscripts		Sunrise Critical Care	Allscript SCM	replaced ECLIPSYS EMTEK CRITICAL CARE SYSTEM			LACUSC			
10	Patient Care	ANKA SYTEMS, INC		EYE IMAGING		SA camera and storage			LACUSC			
11	Patient Care	Apollo Pacs, Inc	PathPACs	Apollo PathPACs		brings PACS features and functionality to the Pathology department.		OVUCLA				

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
12	Patient Care	ATLAS	ICS	Infection Control		Remote Hosting reporting of infectious Diseases		OVUCLA	LACUSC	HUCLA		RLANRC
13	Patient Care	BioEx Systems Inc.		Exercise Pro				OVUCLA				
14	Patient Care	BMJ		Clinical Evidence						HUCLA		
15	Patient Care	CAIR	CAIR	California Immunizatio n Registry						HUCLA		
16	Patient Care	CARDIFF	IDC	ITEMIZED DATA COLLECTIO N TELEFORM			HD		LACUSC	HUCLA	MLK	
17	Patient Care	CARDIFF		Pharmacy eRecovery		DHS Pharmacy Reimbursement Program	HD	OVUCLA			MLK	
18	Patient Care	CARDIFF		SCANNING					LACUSC			
19	Patient Care	Cardinal Health	PIS	Enterprise Ambulatory Pharmacy System	ECC, EPS	Ambulatory pharmacy system with mail order feature	P Pilot site					
20	Patient Care	Carefusion		Pyxis	Connect	order imaging		OVUCLA	LACUSC	HUCLA	MLK	RLANRC
21	Patient Care	Carefusion		Pyxis	Knowledge Portal			OVUCLA	LACUSC	HUCLA		RLANRC
22	Patient Care	Carefusion		Pyxis	Medstation	Medication order and dispensing	HD	OVUCLA	LACUSC IP	HUCLA	MLK	RLANRC
23	Patient Care	Carefusion		Pyxis	Narcotic C II Safe	Controlled Substance Management		OVUCLA	LACUSC IP	HUCLA		RLANRC
24	Patient Care	Carefusion		Pyxis	System A	Anesthesiology dispensing system		P	LACUSC IP	P		RLANRC
25	Patient Care	CareFusio n VIASYS				Exercise Equipment			LACUSC			
26	Patient Care	Cerner		Etreby		e-Prescribing			LACUSC			
27	Patient Care	CIDATA HAZKNO W		Hazardous Waste Management System							MLK	
28	Patient Care	Clinitek		Status UA		POCT				HUCLA		

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
29	Patient Care	Dialog Medical	None	iMed Consent	Full hosted application	web access to a library of pre-written consents which are selected and printed out.	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
30	Patient Care	Dilon Technologies		Penrad		mammography tracking system			LACUSC			
31	Patient Care	DPSS		LEADER (HWLA)		MediCal verification and HWLA	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
32	Patient Care	Dupont software.		Nuclear Medicine Data Collection System								RLANRC
33	Patient Care	eSignout.com		eSignout	USC Norris Group physician notes				LACUSC			
34	Patient Care	FERRARIS RESPIRATORY		FERRARIS RESPIRATORY	FERRARIS PULMONARY				LACUSC			
35	Patient Care	FormFast		FormFast						HUCLA		
36	Patient Care	Formtran	None	Formtran-Teleform	None	Form and Scanning solution	HD	OVUCLA	LACUSC	HUCLA	MLK	
37	patient Care	Fuji		ProSolv		Cardiology PACS						RLANRC
38	Patient Care	Fuji		RIS		radiology info system			LACUSC			
39	Patient Care	Fuji	Fuji-PACS	Synapse	Obliques, Vidal connect	Picture Archiving and Communication System	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
40	Patient Care	GE	CPN	Centricity Perinatal System	CPN	Perinatal Information System/Obstetric		OVUCLA	LACUSC			
41	Patient Care	GE		CENTRICITY CPA SYSTEM		ANESTHESIOLOGY			LACUSC			
42	Patient Care	GE		ECG MUSE		CARDIOLOGY			LACUSC		MLK	
43	Patient Care	GHX	GHX	Supply Chain System	purchasing	Patient supplies procurement system		OVUCLA				

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
44	Patient Care	HCIN	HCIN	Health Care Interpreter Network		Video monitor interpretation system		OVUCLA				
45	Patient Care	Health Resources and Services Administration(HRSA)		Toolbox							MLK	
46	patient Care	Hemocare		Mediware (Blood Bank)	HCLL				LACUSC	HUCLA		
47	Patient Care	HillROM		Bed System (bed locating device)		Bed System (bed locating device)			LACUSC			
48	Patient Care	HMS	PMS	Patient Management System		System to verify patients for Managed Care	HD	OVUCLA		HUCLA	MLK	
49	Patient Care	HWDC	MEDS	Medical Eligibility Systems		Verify Patient Eligibility	HD		LACUSC	HUCLA	MLK	RLANRC
50	patient Care	i2i		i2iTracks		Population Health Management	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
51	Patient Care	in house ACN R and I	ATEMM	ATEMM Reports		ED and Urgent Care Tracking		OVUCLA			MLK	
52	Patient Care	in house ACN R and I	DMR	DMR		Disease Management Registry		OVUCLA	LACUSC			
53	Patient Care	in house ACN R and I		Dr. Dictionary		Credentialing		OVUCLA				
54	Patient Care	in house ACN R and I	EEF	Electronic Encounter Form				OVUCLA				
55	Patient Care	in house ACN R and I		Inpatient Clinical Pathways		Tool used by Providers to give complete care for a particular episode		OVUCLA	LACUSC	HUCLA		
56	Patient Care	in house OVUCLA		Patient Classification System		System utilized by the administrative nursing office		OVUCLA				
57	Patient Care	in house OVUCLA		Physician Admitting List		Admitting List Information System		OVUCLA				
58	Patient Care	in house OVUCLA		Sign-out System		Custom system designed to track physician		OVUCLA				

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
						sign-outs						
59	Patient Care	in house RLANRC		Ambulatory Care Dashboard		Dashboard for Ambulatory Care						RLANRC
60	Patient Care	in house RLANRC		Case Management Continuity of Care								RLANRC
61	Patient Care	in house RLANRC		Death Certificate Database								RLANRC
62	Patient Care	in house RLANRC		Diabetes Tracking System								RLANRC
63	Patient Care	in house RLANRC		Drug Utilization Evaluation Tracking System								RLANRC
64	Patient Care	in house RLANRC		EnvServices. Net		environmental						RLANRC
65	Patient Care	in house RLANRC		Medical Credential Management System								RLANRC
66	Patient Care	in house RLANRC		Patient Advocate Deficiencies								RLANRC
67	Patient Care	in house RLANRC	RSL	Rancho Surgical Ledger System		Surgical Log prior to CoPath						RLANRC
68	Patient Care	in house RLANRC		Repository.N et		.net program for Clinical Data Repository Reports						RLANRC
69	Patient Care	in house RLANRC		Rtis.net		Automates the Rehab clinical documentation and charging						RLANRC
70	Patient Care	in house RLANRC		TAR.Net		Treatment Authorization Request (TAR). track Medi-Cal authorization requests.						RLANRC
71	Patient Care	in house RLANRC		Wheelchair Tracking System		Access Database Wheelchair						RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
						Tracking System						
72	Patient Care	InSigntMRI		InSigntMRI		MRI electronics	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
73	Patient Care	INTELLIDOSE		INTELLIDOSE		cimo calc pharmacy				HUCLA		
74	Patient Care	ISD	eCaps	eCaps	Revenue	County-Wide Revenue Reporting System.	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
76	Patient Care	ISD	HMMS	HEALTH MATERIALS MANAGEMENT SYSTEM		manages the inventory of supplies, medical equipment and forms for the DHS.			LACUSC	HUCLA	MLK	RLANRC
77	Patient Care	ISD	PSCAS	PSCAS	PSCAS - Inpatient	Inpatient Pharmacy System			LACUSC IP			RLANRC
78	Patient Care	ISD	PSCAS	PSCAS	PSCAS - Outpatient	Outpatient Pharmacy System	HD	OVUCLA	LACUSC OPD	HUCLA	MLK	RLANRC
79	Patient Care	ISD	PSCAS	PSCAS	WebRx	Online prescription writing tool - Electronic Medication Reconciliation			LACUSC IP		MLK	RLANRC
80	Patient Care	ISD	PADI	PSCAS - PADI	Outpatient	Outpatient Pharmacy on the Web		OVUCLA	LACUSC	HUCLA		RLANRC
81	Patient Care	JCRinc	AMP	ACCREDITATION MANAGER PLUS		Joint Commission toolkit		OVUCLA	LACUSC			
82	Patient Care	Kofax		Kofax scanning		scanning	HD					
83	Patient Care	KRAMES staywell		PATIENT EDUCATION						HUCLA		
84	patient Care	LAC PH		Public Health Labs					LACUSC			
85	Patient Care	Lancet	TEMIS	Trauma and Emergency Medicine Information System		Department wide system. Tracks each emergency ambulance call in Los Angeles County. In pace. Not currently Used longer	HD	OVUCLA	LACUSC	HUCLA		RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
						Used						
86	Patient Care	Lifescan		Glucometer	Glucose Monitoring System	This is a bedside instrument, it links to Telcor			LACUSC	HUCLA	MLK	RLANRC
87	Patient Care	Logical Imaging	VDX	VISUAL DX	VISUAL DX	Webased dermatology diagnosis and treatment system.		OVUCLA		HUCLA		
88	Patient Care	M*Model (formerly Medquist)		Medquist DocQmanage		billing etc for transcription	HD	OVUCLA				
89	Patient Care	M*Model (formerly Medquist)		Medquist Speech Q	Speech Q	HIM and Radiology Transcription interface to Affinity						RLANRC
90	Patient Care	M*Model (formerly Medquist)		Medquist Transcription	Transcription	Dictation System	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
91	Patient Care	MagView		MagView		Mammography Reading System					MLK	
92	Patient Care	Mammography Reporting System Inc.	MRS	MRS (Mammography)			HD	OVUCLA				
93	Patient Care	McKesson		ANSOS ONESTAFF		Nursing Scheduling System		OVUCLA	LACUSC	HUCLA	MLK	RLANRC
94	Patient Care	McKesson	CerMe	CERME	InterQual CerMe	billing - case manager		OVUCLA	LACUSC	HUCLA		RLANRC
95	Patient Care	McKesson (PER SE)	ORSOS	ORSOS		SURGERY SCHEDULING SYSTEM		OVUCLA	LACUSC	HUCLA	MLK	RLANRC
96	Patient Care	MDSInfo INC.			SYSTEMS	NEONATAL ICU			LACUSC			
97	Patient Care	Medi-Cal		TAR		Treatment Authorization Request		OVUCLA	LACUSC		MLK	RLANRC
98	Patient Care	MEDIWARE		MEDIWARE	HCLL	Blood Bank System				HUCLA		
99	Patient Care	MEDIWARE		MEDIWARE	LIFELINE	Blood Bank System			LACUSC			
100	Patient Care	MICROMEDIX		MICROMEDIX		Provide drug information and formulary to Pharmacy		OVUCLA		HUCLA	MLK	RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
101	Patient Care	Midas+ Solutions		MIDAS		Utilization Review				HUCLA		
102	Patient Care	Natus/Embla/Covidien		Sandman SLEEP		Sleep Monitoring Equipment			LACUSC			
103	Patient Care	Nihon Kohden		EEG System		EEG System					MLK	
104	Patient Care	nSpirehealth		nSpirehealth		Pulmonary Function Equipment			LACUSC			
105	Patient Care	Nuance		Dragon NaturallySpeaking	Laboratory	Anatomical Pathology voice recognition software used with CoPath.		OVUCLA				
106	Patient Care	OLYMPUS		GI ENDOSCOPY	Endoworks 7 & CORI 4 Systems	ENDOSCOPY		OVUCLA	LACUSC	HUCLA		
107	Patient Care	OmniPage		OmniPage		scanning	HD					
108	Patient Care	OPTILITY	NPM	NPM		OPTILITY NUCLEAR PHARMACY & MEDICINE			LACUSC		MLK	
109	Patient Care	Oracle	eGate	eGate Enterprise Manager and Monitoring		Interface engine for Lab, Radiology, Pharmacy and Affinity.		OVUCLA	LACUSC	HUCLA		RLANRC
110	Patient Care	Parata		ACCUMED		cabinet			LACUSC	HUCLA		
111	Patient Care	Parata	P2000	Pharmacy 2000	Parata Pharmacy 2000	Outpatient dispensing system		OVUCLA	LACUSC OPD	HUCLA in N22	MLK	RLANRC
112	Patient Care	PATTERSON		DENTAL SYSTEMS		DENTAL IMAGING			LACUSC			
113	Patient Care	Pharmacy OneSource	Quantifi	Pharmacy OneSource Quantifi	Quantifi	Pharmacists Intervention, Error Documentation & Reporting		OVUCLA	LACUSC IP	HUCLA	MLK	RLANRC
114	Patient Care	PHILIPS		Tracemaster		ECG Image storage and retrieval system for Cardiology		OVUCLA		HUCLA		
115	Patient Care	PHILIPS		iSite	iQuery	Medical Imaging Web viewer		OVUCLA	LACUSC	HUCLA	MLK	RLANRC
116	Patient Care	PHILIPS		VASCULAR IMAGING SYSTEM		in SURGERY			LACUSC			

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
117	Patient Care	PHILIPS		Xcelera - Echo	Xcelera - Echo	PACS System for Cardiology		OVUCLA	LACUSC	HUCLA		
118	Patient Care	PHILIPS			PATIENT MONITORING DEVICES				LACUSC	HUCLA		
119	Patient Care	Philips WITT		cath lab	HEMO-DYNAMCES SYSTEM				LACUSC	HUCLA		
120	Patient Care	ProSec		My Child		Abduction Alert System (Code Pink)		OVUCLA				
121	Patient Care	Provider Advantage		Verilink (Revenue 360)		Medi-Cal Eligibility		OVUCLA				RLANRC
122	Patient Care	QuadraMed	EDI-270/271	Affinity	270/271 - Electronic Eligibility		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
123	Patient Care	QuadraMed	EDI-835	Affinity	835 - Electronic Payments(5)		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
124	Patient Care	QuadraMed	AC	Affinity	Activity Charting	in contracts	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
125	Patient Care	QuadraMed	PC VS	Affinity	Advanced Monitor Data Capture	Patient Charting VS		OVUCLA		HUCLA		
126	Patient Care	QuadraMed	CHASS	Affinity	Assessment Charting	Nursing	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
127	Patient Care	QuadraMed	CV	Affinity	Chart View	in contracts	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
128	Patient Care	QuadraMed	CA	Affinity	Clinical Workstation	Clinician Access	HD	OVUCLA	LACUSC	HUCLA	MLK in progress	
129	Patient Care	QuadraMed	DM	Affinity	Department Management		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
130	Patient Care	QuadraMed	DRG	Affinity	DRG/Case Mix	in contracts	HD	OVUCLA		HUCLA	MLK	RLANRC
131	Patient Care	QuadraMed	HN	Affinity	Health Notes - transcribed reports		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
132	Patient Care	QuadraMed	MRA	Affinity	HIM: Medical Records Abstracting	with 3M - Current (not RLA)	HD	OVUCLA	LACUSC	HUCLA		RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
133	Patient Care	QuadraMed	MRC	Affinity	HIM: Medical Records Control - Current		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
134	Patient Care	QuadraMed		AFFINITY	info retreval				LACUSC			
135	Patient Care	QuadraMed	MRI	Affinity	Medical Record Index		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
136	Patient Care	QuadraMed	OE/RR	Affinity	Order Management	Order Entry/Result Reporting	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
137	Patient Care	QuadraMed	PA	Affinity	Patient Accounting		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
138	Patient Care	QuadraMed	ADTR	Affinity	Patient Registration		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
139	Patient Care	QuadraMed	PSS	Affinity	Patient Scheduling	Schedule View - Current	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
140	Patient Care	QuadraMed	PM-CPA	Affinity	Performance Measurement	Cost Profitability Analyzer		OVUCLA	LACUSC	HUCLA	MLK	RLANRC
141	Patient Care	QuadraMed	PharmPro	Affinity	PharmPro	IP-Hospital Pharmacy		OVUCLA		HUCLA		
142	Patient Care	QuadraMed	POC	Affinity	Plan of Care	Nursing & Ancillaries	HD	OVUCLA	LACUSC		MLK	
143	Patient Care	QuadraMed	QM	Affinity	Quality Management	(QI Studies, Incident Reporting)	HD		LACUSC	HUCLA	MLK	RLANRC
144	Patient Care	QuadraMed	UM	Affinity	Utilization Management		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
145	Patient Care	QuadraMed		Jail Ward Scheduling					LACUSC			
146	Patient Care	Quadramed		MediSpan		Outpatient Medication History						RLANRC
147	Patient Care	QuadraMed	MPI	MPI	Precise ID		HD in progress	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
148	Patient Care	QuadraMed	MPI	MPI Suite	Smart ID		HD in progress	OVUCLA	LACUSC	HUCLA	MLK	RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
149	Patient Care	QuadraMed	MPI	MPI Suite	Smart Merge		HD in progress	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
150	Patient Care	QuadraMed	MPI	MPI Suite	Spy		HD in progress	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
151	Patient Care	QuadraMed		Quantim	Abstracting					HUCLA		
152	Patient Care	QuadraMed		Quantim	Chart Locator				LACUSC			
153	Patient Care	QuadraMed		Quantim	Chart Completion		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
154	Patient Care	QuadraMed		Quantim	Correspondence Management		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
155	Patient Care	QuadraMed	EDM HIM	Quantim	EDM HIM	Electronic Document Management Health Information Management	HD	OVUCLA	LACUSC	HUCLA	MLK in progress	RLANRC
156	Patient Care	QuadraMed	EDM RM	Quantim	EDM Revenue Management	Electronic Document Management Financial Documents	HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
157	Patient Care	QuadraMed		Quantim	eSignature		P		LACUSC	HUCLA	P	RLANRC
158	Patient Care	QuadraMed		Quantim	Facility Coding		P	OVUCLA	P	HUCLA	MLK	RLANRC
159	Patient Care	QuadraMed		Quantim	Inpatient Compliance		P	OVUCLA	P	HUCLA		RLANRC
160	Patient Care	QuadraMed		Quantim	Outpatient Compliance		P	OVUCLA	P	HUCLA	MLK	RLANRC
161	Patient Care	QuadraMed		Quantim	Report Writer		HD	OVUCLA	LACUSC	HUCLA	MLK	RLANRC
162	Patient Care	R4 Software		R4 Ultrasound Reporting System		Ultrasound reporting system utilized in fetal assessment		OVUCLA				
163	Patient Care	Rauland Borg		NURSE CALL SYSTEM		To be replaced by Simplex-Grinnell				HUCLA		
164	Patient Care	ReddiNet		ReddiNet		Track Status of Emergency		OVUCLA		HUCLA	MLK	RLANRC

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
						Rooms and Bed (Used in Diaster Planning for MACC)						
165	Patient Care	Respond	Respond	Employee Health						HUCLA		
166	Patient Care	Rightfax	Rightfax	RightFax	Enterprise Fax Solution	Enterprise Fax Solution			LACUSC IP			
167	Patient Care	RX writing		RX Writing		Pharmacy				HUCLA		
168	Patient Care	Saga Technologi es	EmHUB	EmHUB		for DCSS foster childred	HD	OVUCLA	LACUSC	HUCLA	MLK	
169	Patient Care	Sansio		Xchange ER	Xchange ER	EMS Software		OVUCLA				
170	Patient Care	Siemens		Vitrea		3D Recon medical imaging diagnosics	HD	OVUCLA		HUCLA	MLK	RLANRC
171	Patient Care	Softmed		CNet Tumor Registry System		demographic, diagnosis and treatment data on all cancer cases.					MLK	
172	Patient Care	SoftWriters	FrameWork LTC	FrameWork LTC	JCHS pharmacy system	JCHS Pharmacy system			LACUSC			
173	Patient Care	SPACE LAB			PATIENT MONITORI NG DEVICES				LACUSC			
174	Patient Care	SumTotal Systems		PATHLORE		Nursing education tracking application				HUCLA		
175	Patient Care	Sunquest Information Systems, Inc.	CoPath	Enterprise Laboratory Information System	Anatomic Pathology	CoPath Pathology sysem for LAC+USC, MLK, and RLANRC		OVUCLA	LACUSC IP		MLK	RLANRC
176	Patient Care	Sunquest Information Systems, Inc.	ELIS	Enterprise Laboratory Information System	Laboratory	Lab System for LAC+USC, MLK, RLANRC, HDHS	HD		LACUSC		MLK	RLANRC
177	Patient Care	Sunquest Information Systems, Inc.	CLIS	HUMC Lab System	Laboratory	Lab System for HUMC				HUCLA		
178	Patient Care	Sunquest Information	CLIS	OVUCLA Lab System	Laboratory	Lab System for OVUCLA		OVUCLA				

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
		Systems, Inc.										
179	Patient Care	Syngo	Syngo	Pediatric Echo						HUCLA		
180	Patient Care	TALYST		Barcoding Pre-Packing		Medication Barcoding Pre-Packing System		OVUCLA		HUCLA		RLANRC
181	Patient Care	TALYST		Carousel		Inventory & Workflow Mngmt Carousel		OVUCLA		HUCLA		RLANRC
182	patient Care	Talyst		IP pharmacy inv.		To be			LACUSC			
183	Patient Care	Telcor		Telcor		POCT interface for CLIS		OVUCLA	LACUSC		MLK	RLANRC
184	Patient Care	TELETRACKING		ELECTRONIC BED BOARD					LACUSC			
185	Patient Care	TMS Enterprise		Web Based Mnt		Equip Maint, Ser call etc. Web Based					MLK	
186	Patient Care	Total Living Choices	TLC	Care Finder-Pro		transitional care (electronic discharge)		OVUCLA	LACUSC			RLANRC
187	Patient Care	Trans-Lux	Trans-Lux	Trans-Lux	Trans-Lux	Outpatient Pharmacy Notification		OVUCLA	LACUSC OPD	HUCLA	MLK	RLANRC
188	Patient Care	UCSB	AVSS	Automated Vital Statistics System		Birth reporting system with ad hoc reporting capability					MLK	
189	Patient Care	UHC University Healthsystems Consortium		Core Measures						HUCLA		RLANRC
190	Patient Care	UHC University Healthsystems Consortium	PSN	PSN - Patient Safety Net Incident Tracking and Near Miss Reporting System	Full hosted application	Web-based reporting of any incident to Patient and non-patients at the hospital	HD	OVUCLA	LACUSC OPD	HUCLA	MLK	RLANRC
191	Patient Care	UpToDate		CME Credit						HUCLA		
192	Patient Care	VARIAN SYSTEMs				RADIATION ONCOLOGY			LACUSC			

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
193	Patient Care	VerinForm		VERINFORM		Remote Hosting, manages, monitors and reports on the activities of Resident Physician Staff		OVUCLA	LACUSC	HUCLA		
194	Patient Care	Visioneer		Visioneer Scanner		scanning	HD					
195	Patient Care	Voice Tech Inc.	IVR	IVR - Interactive Voice Response	IVR	Outpatient phone refill	HD	OVUCLA	LACUSC OPD	HUCLA	MLK	RLANRC
196	Patient Care	Wellsoft	EDIS	Wellsoft EDIS	Phase 1			OVUCLA	LACUSC	HUCLA		
197	Patient Care			Brain Train		rehab training tool	HD					
198	Patient Care			CANCERNET		HIM				HUCLA		
199	Patient Care			Captains log		rehab training tool	HD					
200	Patient Care			CBORD DOOR SECURITY						HUCLA		
202	Patient Care			CHP REFERRAL TRACKING & REPORTING SYSTEM					LACUSC			
203	Patient Care			COHR PREVENTIVE MAINTENANCE		Facilities Management Biomedical PM system				HUCLA		
204	Patient Care		HCAP	Diabetics System		Diabetics System					MLK	
206	Patient Care			GLOERULAR FILTRATION RATE CALCULATOR					LACUSC			
207	Patient Care		HCIN	HEALTHCARE INTERPRETOR NETWORK		Video Monitor Interpretation System				HUCLA	MLK	
209	Patient Care		EKG EEG	holter		eeg/ekg holter	HD					

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
210	Patient Care			JACHO Standard								RLANRC
211	Patient Care		**JDIC**	**JDIC**		Computer Aided Dispatch					MLK	
212	Patient Care			LAB HANDBOOK					LACUSC			
213	Patient Care			Liver Turner Registry								RLANRC
214	Patient Care		LUM	LOAD UNIT MEASURE		Supply Chain Application				HUCLA	MLK	
215	Patient Care			MedQuest						HUCLA		
216	Patient Care			On-Call Calendar								RLANRC
217	Patient Care		ORSA	Outpatient Reduce Cost Simplify Appliction System		Outpatient Reduce Cost Simplify Appliction System					MLK	RLANRC
218	Patient Care			Patient Satisfaction Survey		Department wide system annual patient satisfaction survey					MLK	
219	Patient Care			PEMRS		(Probation, Sheriff, DHS, and DMH)			LACUSC			
220	Patient Care			Rees Temperature Monitoring System		Remote montoring of refrigerators in Lab and Pharmacy					MLK	
221	Patient Care			Retinal scanning			HD					
222	Patient Care			RX Checking						HUCLA		
223	Patient Care			VHI Rehabilitatio n Sys			HD					
224	Patient Care			Watchmate		Patient Wondering System.						RLANRC
225	Patient Care				WEST CALL	NURSING CALL STATION			LACUSC			
226	Patient Care	in house EMS	RightCAD	Ambulance Dispatching System		manages non-emergency patient transport data						

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
227	Patient Care	in house EMS	PTIS	Patient Transfer Information System		data required to facilitate the transfer of patients from private medical facilities into County medical facilites						
228	Patient Care	in house EMS	PEPSI	Pre-Hospital Emergency Personnel System Information		manages Paramedic, Emergency Medical Technichians and Mobile Intensive Care Nureses...						
229	Patient Care	in house EMS	PDIS	Psychiatric Diverson Information System		demographic information regarding psychiatric patients						
230	Patient Care	in house HSA IT		ATB		Download Patient Account Information from all the Affinity systems ...						
231	Patient Care	in house HSA IT		CHP - Grievance		Allow the public to submit online grievance to the CHP						
232	Patient Care	in house HSA IT		Clinic Search		Allow the public to search for a cllinic by city and zip code						
233	Patient Care	in house HSA IT		Consumer Health Information		Allow the public to research on health information thru ADAM						
234	Patient Care	in house HSA IT	EDR	DHS REPOSITOR Y		ELECTRONIC DATA REPOSITORY						
235	Patient Care	in house HSA IT		Encounter Summary Sheet		Enable Doctors to view the Patient Data from outside the DHS Network						
236	Patient Care	in house HSA IT	HWLA	Healthy Way LA		Allow Hospitals Clinics and PPP to enroll their						

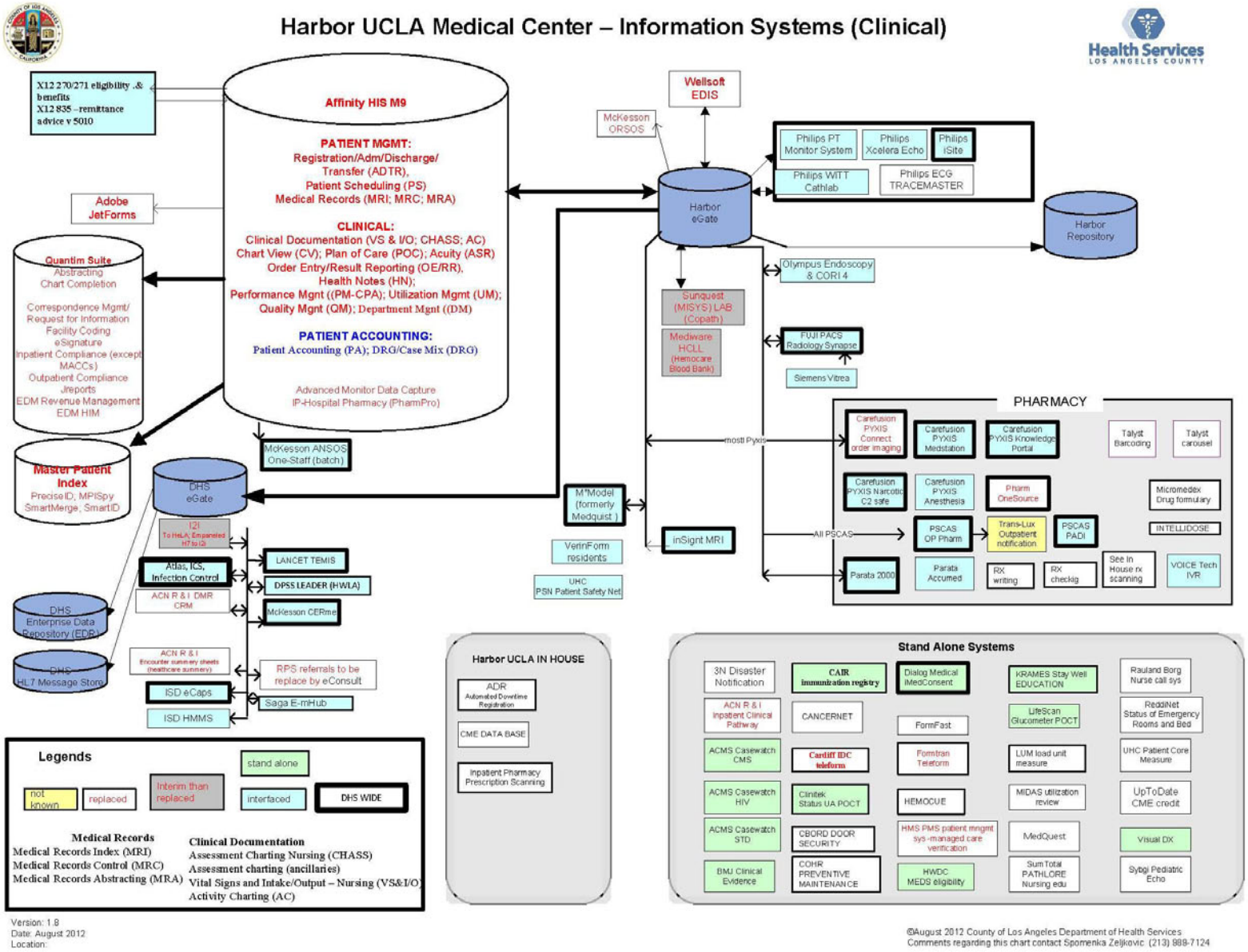
NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
						patients to the HWLA program						
237	Patient Care	in house HSA IT		Juvenile Court Health Services.		Collects all Juvenile health records						
238	Patient Care	In house HSA IT	RPS	Referral Processing System		Referral Patient System - Replace by eConsult						
239	Patient Care	in house HSA IT	STEMI	ST Elevated Mycardial Infarction Data Management System		STEMI receiving centers to maintain statistical data regarding this specialized type of cardiac patient						
240	Patient Care	in house HSA IT	SCDMS	Stroke Center Data Management System		web-based used by approved 'Stroke Centers' manage both demographic and clinical data						
241	Patient Care	in house HSA IT		Web Referral Form		Allow the Office of Ambulatory Care users to submit Request to their OAC Admin						
242	Patient Care	In House HUCLA	ADR	Automated Downtime Registration		Registration						
243	Patient Care	In house HUCLA		CME DATA BASE								
244	Patient Care	In House HUCLA		Inpatient Pharmacy Prescription Scanning		pharmacy						
245	Patient Care	in house LACUSC		Affinity Physician Update								
246	Patient Care	in house LACUSC		ASTHMA WATCH SYSTEM		SA						
247	patient Care	in house LACUSC		BED CENSUS MANAGEMEN T								
248	patient Care	in house LACUSC		blood utilization								

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
249	Patient Care	in house LACUSC		BLOOD/BODY FLUID EXPOSURE DATABASE								
250	Patient Care	in house LACUSC		BRAIN INJURY CLINIC WEB SITE								
251	Patient Care	in house LACUSC		Correct Action Tracking		(Pressure Ulcer Case)						
252	Patient Care	in house LACUSC		CRITICAL LAB VALUES DATABASE								
253	Patient Care	in house LACUSC		FETAL MONITORING APPLICATION		Monitors and captures maternal and fetal vital signs.						
254	Patient Care	in house LACUSC		HCAHPS SURVEY								
255	Patient Care	in house LACUSC		HIV DATABASE APPLICATION								
256	Patient Care	in house LACUSC		HOSPITAL MEDICINE WEB SITE								
257	Patient Care	in house LACUSC		ICU CONSULT DATABASE								
258	Patient Care	in house LACUSC		INFECTION CONTROL								
259	patient Care	in house LACUSC		Medical Staff DB		APPLICATION PROCESSING & CREDENTIALING						
260	Patient Care	in house LACUSC		PATIENT COMPLAINT DATABASE								
261	patient Care	in house LACUSC	PFS	Patient financial services								
262	Patient Care	in house LACUSC		PATIENT FLOW ANALYSIS TOOLS								

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
263	Patient Care	in house LACUSC		PATIENT SAFETY EDUCATION								
264	Patient Care	in house LACUSC		PEDIATRIC ORTHOPEDIC DATABASE								
265	Patient Care	in house LACUSC		PHYSICIAN TEAM DATABASE								
266	Patient Care	in house LACUSC		RISK MANAGEMENT	INCIDENT REPORTING DATABASE							
267	patient Care	in house LACUSC		Startel tracking calls		for Starter						
268	Patient Care	in house LACUSC		TB SCREENING QUESTIONNAIRE DATABASE								
269	Patient Care	in house LACUSC	TAR.NET	TREATMENT AUTHORIZATION REQUEST		QRM/UR DATABASE						
270	Patient Care	in house LACUSC		WEBCENSUS DATABASE								
271	patient Care	in house LACUSC	CRM			Clinical Resource Management (CRM)						
272	Patient Care	in house MLK	ATP	Automated Outpatient Ability to Pay		determination of an outpatient's ability to pay for services.						
273	Patient Care	in house MLK		Patient Flow Analysis								
274	Patient Care	in house OMC		Accordis								
275	Patient Care	in house OMC		Alert PE								
276	Patient Care	in house OMC		ALERTCOMM								
277	Patient Care	in house OMC		CHPDR Front-End Application								

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
278	Patient Care	in house OMC		DDD								
279	Patient Care	in house OMC		DDD_CHDP								
280	Patient Care	in house OMC		DDD_HFP								
281	Patient Care	in house OMC		DDD_IHSS								
282	Patient Care	in house OMC		FAME								
283	Patient Care	in house OMC		GRMAIN								
284	Patient Care	in house OMC	HP	Health Plan Track		Cobra, Cal-Cobra, Individual Conversion Plan						
285	Patient Care	in house OMC		HealthNet								
286	Patient Care	in house OMC		HFPCapitation								
287	Patient Care	in house OMC		HFPMAIN								
288	Patient Care	in house OMC		IHSSMain								
289	Patient Care	in house OMC		LACARE								
290	Patient Care	in house OMC		LACare_HP								
291	Patient Care	in house OMC		Master Provider Database (MPD)								
292	Patient Care	in house OMC		MEMBERS								
293	Patient Care	in house OMC		MMCP RetroCap								
294	Patient Care	in house OMC		MMCP__Enc								
295	Patient Care	in house OMC		MRMIB								
296	Patient Care	in house OMC		OMCFSD								
297	Patient Care	in house OMC		OthrPROV								
298	Patient Care	in house OMC		PCNMain								
299	Patient Care	in house OMC		Pharm_Enc								
300	Patient Care	in house OMC		Pharmacy								

NO.	Type	Vendor	Acronym	System Name	Module	Description	HD	Olive View UCLA	LACUSC	Harbor UCLA	MLK	Rancho Los Amigos
301	Patient Care	in house OMC		PMS_HFP								
302	Patient Care	in house OMC		PMSArch								
303	Patient Care	in house OMC		PMSMain								
304	Patient Care	in house OMC		ProvAssign-Auto								
305	Patient Care	in house OMC		RetroCap Rate Database								


Harbor UCLA Medical Center – Information Systems (Clinical)
Health Services
LOS ANGELES COUNTY
X12 270/271 eligibility ,& benefits
X12 835 – remittance advice v 5010
Affinity HIS M9
PATIENT MGMT:
Registration/Adm/Discharge/ Transfer (ADTR),
Patient Scheduling (PS)
Medical Records (MRI; MRC; MRA)
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Order Entry/Result Reporting (OE/RR),
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Quality Mgnt (QM); Department Mgnt ((DM)
PATIENT ACCOUNTING:
Patient Accounting (PA); DRG/Case Mix (DRG)
Advanced Monitor Data Capture
IP-Hospital Pharmacy (PharmPro)
Adobe JetForms
Quantim Suite
Abstracting
Chart Completion
Correspondence Mgmt/ Request for Information
Facility Coding
eSignature
Inpatient Compliance (except MACCs)
Outpatient Compliance
Jreports
EDM Revenue Management
EDM HIM
Master Patient Index
PreciseID; MPISpy
SmartMerge; SmartID
McKesson ANSOS One-Staff (batch)
DHS eGate
I2I
To HeLA; Empaneled H7 to I2
Atlas, ICS, Infection Control
ACN R & I DMR CRM
LANCET TEMIS
DPSS LEADER (HWLA)
McKesson CERme
DHS Enterprise Data Repository (EDR)
DHS HL7 Message Store
ACN R & I
Encounter summary sheets (healthcare summary)
RPS referrals to be replace by eConsult
ISD eCaps
Saga E-mHub
ISD HMMS
McKesson ORSOS
Wellsoft EDIS
Philips PT Monitor System
Philips Xcelera Echo
Philips iSite
Philips WITT Cathlab
Philips ECG TRACEMASTER
Harbor eGate
Harbor Repository
Olympus Endoscopy & CORI 4
Sunquest (MISYS) LAB (Copath)
Mediware HCLL (Hemocare Blood Bank)
FUJI PACS Radiology Synapse
Siemens Vitrea
M*Model (formerly Medquist)
VerinForm residents
UHC PSN Patient Safety Net
inSignt MRI
PHARMACY
Carefusion PYXIS Connect order imaging
Carefusion PYXIS Medstation
Carefusion PYXIS Knowledge Portal
Talyst Barcoding
Talyst carousel
Carefusion PYXIS Narcotic C2 safe
Carefusion PYXIS Anesthesia
Pharm OneSource
Micromedex Drug formulary
PSCAS OP Pharm
Trans-Lux Outpatient notification
PSCAS PADI
INTELLIDOSE
Parata 2000
Parata Accumed
RX writing
RX checkig
See In House rx scanning
VOICE Tech IVR
Legends
not known
replaced
Interim than replaced
stand alone
interfaced
DHS WIDE
Medical Records
Medical Records Index (MRI)
Medical Records Control (MRC)
Medical Records Abstracting (MRA)
Clinical Documentation
Assessment Charting Nursing (CHASS)
Assessment charting (ancillaries)
Vital Signs and Intake/Output – Nursing (VS&I/O)
Activity Charting (AC)
Harbor UCLA IN HOUSE
ADR
Automated Downtime Registration
CME DATA BASE
Inpatient Pharmacy Prescription Scanning
Stand Alone Systems
3N Disaster Notification
CAIR immunization registry
Dialog Medical IMedConsent
KRAMES Stay Well EDUCATION
Rauland Borg Nurse call sys
ACN R & I Inpatient Clinical Pathway
CANCERNET
FormFast
LifeScan Glucometer POCT
ReddiNet Status of Emergency Rooms and Bed
ACMS Casewatch CMS
Cardiff IDC teleform
Formtran Teleform
LUM load unit measure
UHC Patient Core Measure
ACMS Casewatch HIV
Clinitek Status UA POCT
HEMOCUE
MIDAS utilization review
UpToDate CME credit
ACMS Casewatch STD
CBORD DOOR SECURITY
HMS PMS patient mngmt sys -managed care verification
MedQuest
Visual DX
BMJ Clinical Evidence
COHR PREVENTIVE MAINTENANCE
HWDC MEDS eligibility
Sum Total PATHLORE Nursing edu
Sybgi Pediatric Echo
Version: 1.8
Date: August 2012
Location:
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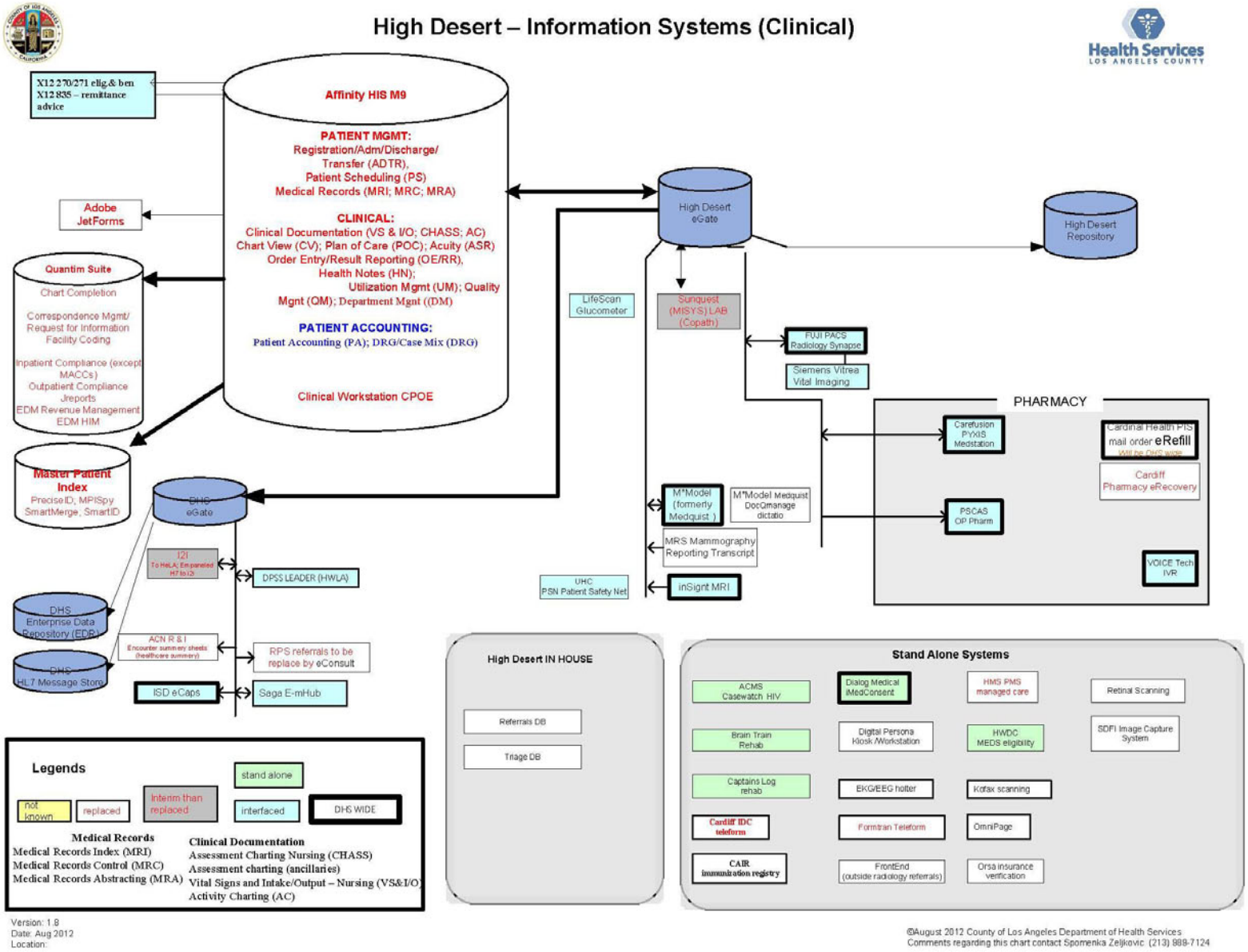
High Desert – Information Systems (Clinical)
Health Services
LOS ANGELES COUNTY
X12 270/271 elig.& ben
X12 835 – remittance advice
Affinity HIS M9
PATIENT MGMT:
Registration/Adm/Discharge/ Transfer (ADTR),
Patient Scheduling (PS)
Medical Records (MRI; MRC; MRA)
CLINICAL:
Clinical Documentation (VS & I/O; CHASS; AC)
Chart View (CV); Plan of Care (POC); Acuity (ASR)
Order Entry/Result Reporting (OE/RR),
Health Notes (HN);
Utilization Mgmt (UM); Quality Mgnt (QM); Department Mgnt ((DM)
PATIENT ACCOUNTING:
Patient Accounting (PA); DRG/Case Mix (DRG)
Clinical Workstation CPOE
Adobe JetForms
Quantim Suite
Chart Completion
Correspondence Mgmt/ Request for Information
Facility Coding
Inpatient Compliance (except MACCs)
Outpatient Compliance
Jreports
EDM Revenue Management
EDM HIM
Master Patient Index
PreciseID; MPISpy
SmartMerge; SmartID
DHS eGate
High Desert eGate
High Desert Repository
LifeScan Glucometer
Sunquest (MISYS) LAB (Copath)
FUJI PACS Radiology Synapse
Siemens Vitrea Vital Imaging
PHARMACY
Carefusion PYXIS Medstation
Cardinal Health PIS mail order eRefill
Cardiff Pharmacy eRecovery
PSCAS OP Pharm
VOICE Tech IVR
M*Model (formerly Medquist)
M*Model Medquist DocQmanage dictatio
MRS Mammography Reporting Transcript
UHC PSN Patient Safety Net
inSight MRI
I2I
DPSS LEADER (HWLA)
DHS Enterprise Data Repository (EDR)
DHS HL7 Message Store
ACN R & I
RPS referrals to be replace by eConsult
ISD eCaps
Saga E-mHub
Legends
not known
replaced
Interim than replaced
stand alone
interfaced
DHS WIDE
Medical Records
Medical Records Index (MRI)
Medical Records Control (MRC)
Medical Records Abstracting (MRA)
Clinical Documentation
Assessment Charting Nursing (CHASS)
Assessment charting (ancillaries)
Vital Signs and Intake/Output – Nursing (VS&I/O)
Activity Charting (AC)
High Desert IN HOUSE
Referrals DB
Triage DB
Stand Alone Systems
ACMS Casewatch HIV
Dialog Medical iMedConsent
HMS PMS managed care
Retinal Scanning
Brain Train Rehab
Digital Persona Kiosk /Workstation
HWDC MEDS eligibility
SDFI Image Capture System
Captains Log rehab
EKG/EEG holter
Kofax scanning
Cardiff IDC teleform
Formtrian Teleform
OmniPage
CAIR immunization registry
FrontEnd (outside radiology referrals)
Orsa insurance verification
Version: 1.8
Date: Aug 2012
Location:
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LAC- USC Medical Center – Information Systems (Clinical)

Health Services
LOS ANGELES COUNTY

X12 270/271 elig.& ben
X12 835 – remittance advice

ATP
Retrieves demographic determines eligibility DB

Adobe JetForms

Affinity HIS M9

PATIENT MGMT:
Registration/Adm/Discharge/
Transfer (ADTR),
Patient Scheduling (PS)
Medical Records (MRI; MRC; MRA)

CLINICAL:
Clinical Documentation (VS & I/O; CHASS; AC)
Chart View (CV); Plan of Care (POC); Acuity (ASR)
Order Entry/Result Reporting (OE/RR),
Health Notes (HN);
Performance Mgnt ((PM-CPA); Utilization Mgmt (UM);
Quality Mgnt (QM); Department Mgnt ((DM)

PATIENT ACCOUNTING:
Patient Accounting (PA); DRG/Case Mix (DRG)

Information Retrieval

Quantim Suite
Chart Completion
Chart Locator
Correspondence Mgmt/
Request for Information
Facility Coding
eSignature
Inpatient Compliance (except MACCs)
Outpatient Compliance
Jreports
EDM Revenue Management
EDM HIM

Master Patient Index
PreciseID; MPISpy
SmartMerge; SmartID

DHS eGate

McKesson ANSOS
One-Staff (batch)

QuadraMed
Jail Ward Scheduling

4PatientCare
Reminder Calls
For Roybal CHC

Allscripts Sunrise Critical Care (Eclipsys)

Wellsoft EDIS

McKesson ORSOS

LACUSC eGate

HillROM Bed System

Teletracking Bed Management

Philips PT Monitor System

Philips Xcelera Echo

Philips iSite

Philips Vascular Imaging

Philips WITT Cathlab

Dilon Technologies
Penrad Mammography

LACUSC Repository IDX

TELCOR
Point of care billing

LifeScan Glucometer

3M Financial Coding

SPACE LAB MONITORING DEVICES

Rapid Text Transcription

M*Model (formerly Medquist)

VerinForm residents

UHC
PSN Patient Safety Net

PEMRS

Sunquest (MISYS) LAB (Copath)

Mediware HCLL (Hemocare Blood Bank)

Mediware Lifeline (bb)

VIASYS Radiology EEG

VIASYS Pulmonary

MDSInfo Syst. NICU

SANDMAN Pulmonary PFT

FUJI RIS

FUJI PACS Radiology Synapse

GE Centricity Anesthesia

GE Centricity OB/GYN

GE MUSE ecg

mosti Pyxis

Olympus Endoscopy & CORI 4

VARIAN SYS Radiation Oncology

All PSCAS

inSignt MRI

PHARMACY

Carefusion PYXIS Connect order imaging

Carefusion PYXIS Medstation

Carefusion PYXIS Knowledge Portal

Talyst IP pharmacy inv.

Carefusion PYXIS Narcotic C2 safe

Carefusion PYXIS Anesthesia

OPTILITY Nuclear Pharmacy

Pharm OneSource

Cerner Etreby
Replace PSCAS
TO BE

PSCAS IP Pharm

PSCAS OP Pharm

Trans-Lux Outpatient notification

PSCAS webRx

PSCAS PADI

Parata 2000

Parata Accumed

SoftWriters FrameWork JCHS Pharmacy

VOICE Tech IVR

DHS Enterprise Data Repository (EDR)

DHS HL7 Message Store

I2I
To HeLA, Empowered HT to I2I

Atlas, ICS, Infection Control

ACN R & I DMR CRM

ACN R & I DMR disease registry

ACN R & I
Encounter summary sheets (healthcare summary)

ISD eCaps

ISD HMMS

LANCET TEMIS

DPSS LEADER (HWLA)

McKesson CERme

Public Health Labs

RPS referrals to be replace by eConsult

Saga E-miHub

TLC Total Living Choices Discharge planner

Affinity Physician Update

LACUSC IN HOUSE

Medical Staff DB

ASTHMA WATCH

BED CENSUS MANAGEMENT

Blood/Body Fluid Exposure DB

blood utilization

Brain Injury Clinic Web Site

CHP Referral tracking

Critical Lab Values DB

Correct Action Tracking (Pressure Ulcer Case)

HCAHPS SURVEY

Fetal Monitoring

HIV DB

ICU Consult DB

Incident Reporting DB

Infection Control

LACUSC CRM used as stand alone

Pediatric Orthopedic DB

Physician Team DB

PFS Patient financial services

Patient Complaint DB

Patient Flow Analysis Tools

Patient Safety Edu

Pediatric Ortho DB

RISK Mngt

Startel tracking calls

TB Screening DB

TAR.net Qmrfur database

Webcensus db

Stand Alone Systems

ACN R & I Inpatient Clinical Pathway

Dialog Medical iMedConsent

Lab Handbook

ALARIS PUMPS

eSignout.com Physician notes

Medi-Cal TAR Treatment authorization request

ANKA Systems Eye imaging

Ferraris Respiratory

Paterson Dental

JCRinc AMP accreditation

Formtran Teleform

RightFax

Cardiff IDC teleform

GLOERULAR FILTRATION RATE CALCULATOR

TAMIS trauma team activation

Cardiff scanning

West Call Nursing call

Legends

not known

replaced

Interim than replaced

stand alone

interfaced

DHS WIDE

Medical Records
Medical Records Index (MRI)
Medical Records Control (MRC)
Medical Records Abstracting (MRA)

Clinical Documentation
Assessment Charting Nursing (CHASS)
Assessment charting (ancillaries)
Vital Signs and Intake/Output – Nursing (VS&I/O)
Activity Charting (AC)

Version: 1.8
Date: August 2012
Location:

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Comments regarding this chart contact Spomenka Zeljkovic (213) 988-7124

MLK Medical Center – Information Systems (Clinical)

Health Services
LOS ANGELES COUNTY

X12 270/271 elig.& ben
X12 835

Affinity HIS

PATIENT MGMT:
Registration/Adm/Discharge/
Transfer (ADTR),
Patient Scheduling (PS)
Medical Records (MRI; MRC; MRA)

CLINICAL:
Clinical Documentation (VS & I/O; CHASS; AC)
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PATIENT ACCOUNTING:
Patient Accounting (PA); DRG/Case Mix (DRG)

Query Library;

Adobe JetForms

Quantim Suite
Chart Completion
Correspondence Mgmt/
Request for Information
Facility Coding
Inpatient Compliance (except MACCs)
Outpatient Compliance
Jreports
EDM Revenue Management
EDM HIM

Master Patient Index
PreciseID; MPISpy
SmartMerge; SmartID

McKesson ANSOS
One-Staff (batch)

DHS eGate

I2I
To HeLA; Empaneled
H7 to I2I

DPSS LEADER (HWLA)

DHS Enterprise Data Repository (EDR)

DHS HL7 Message Store

RPS referrals to be replace by eConsult

ISD eCaps

Saga E-mHub

ISD HMMS

McKesson ORSOS

MLK eGate

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TELCOR Point of care billing

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PSCAS webRx

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Vital Signs and Intake/Output – Nursing (VS&I/O)
Activity Charting (AC)

MLK IN HOUSE

ATP
Outpatient ability to pay

Patient Flow Analysis

Stand Alone Systems

ACMS Casewatch HIV

HCAP diabetics

Formtran Teleform

Nihon Kohden eeg sys

Softmed Cnet Tumor

ACN R & I DMR ATEMM Reports

HCN interpretor network

JDIC Computer Aided Dispatch

ORSA outpatient reduce cost

TMS Equip. mngmt

Cardiff IDC teleform

HMS PMS verification

LUM load unit neasure

Patient Satisfaction Survey

UCSB AVSS vital statistics

CIDATA HAZKNOW waste mngt

HRSA toolbox

MagView mamography reading

ReddiNet MACC disaster planning

Dialog Medical iMedConsent

HWDC MEDS eligibility

Medi-Cal TAR
Treatment authorization request

Rees Temperature Monitoring Frig

Version: 1.8
Date: August 2012
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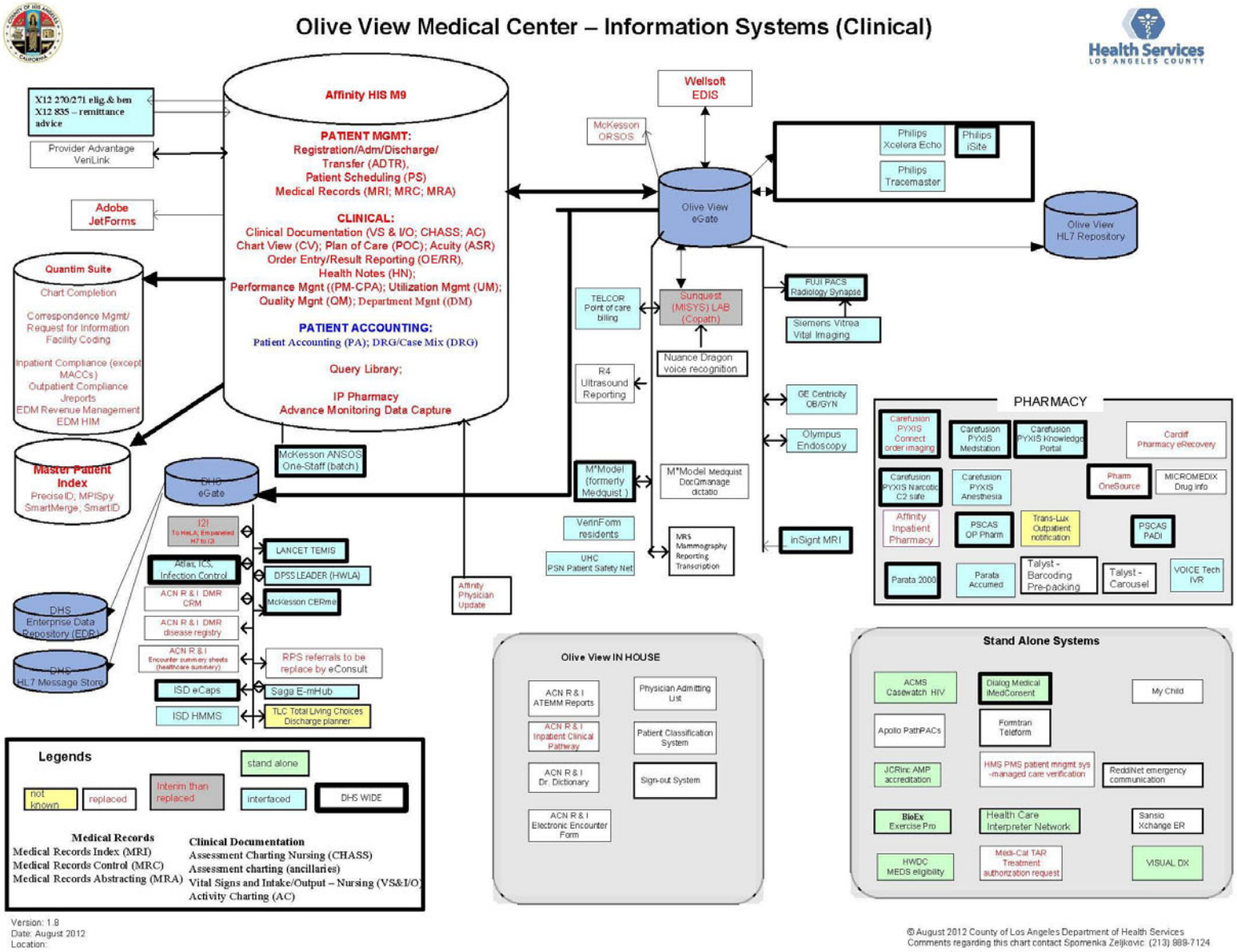
Olive View Medical Center – Information Systems (Clinical)
Health Services
LOS ANGELES COUNTY
X12 270/271 elig.& ben
X12 835 – remittance advice
Provider Advantage VeriLink
Adobe JetForms
Affinity HIS M9
PATIENT MGMT:
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Saga E-mHub
ISD HMMS
TLC Total Living Choices Discharge planner
DHS Enterprise Data Repository (EDR)
DHS HL7 Message Store
Affinity Physician Update
Wellsoft EDIS
McKesson ORSOS
Olive View eGate
Philips Xcelera Echo
Philips iSite
Philips Tracemaster
Olive View HL7 Repository
TELCOR Point of care billing
Sunquest (MISYS) LAB (Copath)
FUJI PACS Radiology Synapse
Siemens Vitrea Vital Imaging
Nuance Dragon voice recognition
R4 Ultrasound Reporting
GE Centricity OB/GYN
Olympus Endoscopy
M*Model (formerly Medquist.)
M*Model Medquist DocQmanage dictatio
VennForm residents
UHC PSN Patient Safety Net
MRS Mammography Reporting Transcription
inSight MRI
PHARMACY
Carefusion PYXIS Connect order imaging
Carefusion PYXIS Medstation
Carefusion PYXIS Knowledge Portal
Cardiff Pharmacy eRecovery
Carefusion PYXIS Narcotic C2 safe
Carefusion PYXIS Anesthesia
Pharm OneSource
MICROMEDIX Drug info
Affinity Inpatient Pharmacy
PSCAS OP Pharm
Trans-Lux Outpatient notification
PSCAS PADI
Parata 2000
Parata Accumed
Talyst - Barcoding Pre-packing
Talyst - Carousel
VOICE Tech IVR
Legends
not known
replaced
Interim than replaced
stand alone
interfaced
DHS WIDE
Medical Records
Medical Records Index (MRI)
Medical Records Control (MRC)
Medical Records Abstracting (MRA)
Clinical Documentation
Assessment Charting Nursing (CHASS)
Assessment charting (ancillaries)
Vital Signs and Intake/Output – Nursing (VS&I/O)
Activity Charting (AC)
Olive View IN HOUSE
ACN R & I ATEMM Reports
Physician Admitting List
ACN R & I Inpatient Clinical Pathway
Patient Classification System
ACN R & I Dr. Dictionary
Sign-out System
ACN R & I Electronic Encounter Form
Stand Alone Systems
ACMS Casewatch HIV
Dialog Medical iMedConsent
My Child
Apollo PathPACs
Formtran Teleform
JCRinc AMP accreditation
HMS PMS patient mngmt sys -managed care verification
ReddiNet emergency communication
BioEx Exercise Pro
Health Care Interpreter Network
Sansio Xchange ER
HWDC MEDS eligibility
Medi-Cal TAR Treatment authorization request
VISUAL DX
Version: 1.8
Date: August 2012
Location:
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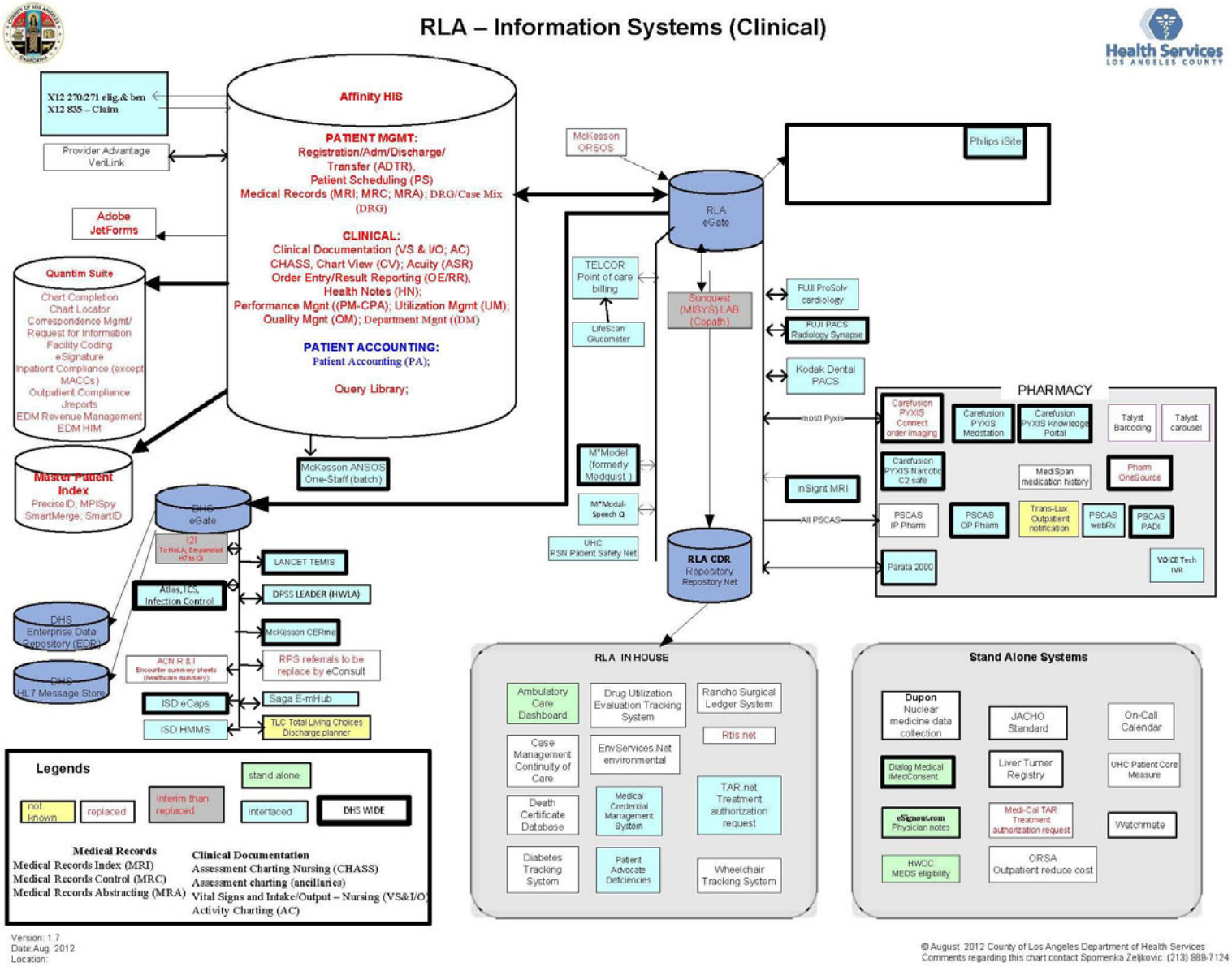
Comments regarding this chart contact Spomenka Zeljkovic (213) 988-7124


RLA – Information Systems (Clinical)
Health Services
LOS ANGELES COUNTY
X12 270/271 elig.& ben
X12 835 – Claim
Provider Advantage
VeriLink
Adobe
JetForms
Quantim Suite
Chart Completion
Chart Locator
Correspondence Mgmt/
Request for Information
Facility Coding
eSignature
Inpatient Compliance (except MACCs)
Outpatient Compliance
Jreports
EDM Revenue Management
EDM HIM
Master Patient Index
PreciseID; MPISpy
SmartMerge; SmartID
Affinity HIS
PATIENT MGMT:
Registration/Adm/Discharge/
Transfer (ADTR),
Patient Scheduling (PS)
Medical Records (MRI; MRC; MRA); DRG/Case Mix (DRG)
CLINICAL:
Clinical Documentation (VS & I/O; AC)
CHASS, Chart View (CV); Acuity (ASR)
Order Entry/Result Reporting (OE/RR),
Health Notes (HN);
Performance Mgnt ((PM-CPA); Utilization Mgmt (UM);
Quality Mgnt (QM); Department Mgnt ((DM)
PATIENT ACCOUNTING:
Patient Accounting (PA);
Query Library;
McKesson ANSOS
One-Staff (batch)
McKesson
ORSOS
RLA
eGate
Philips iSite
TELCOR
Point of care
billing
LifeScan
Glucometer
Sunquest
(MISYS) LAB
(Copath)
FUJI ProSolv
cardiology
FUJI PACS
Radiology Synapse
Kodak Dental
PACS
M*Model
(formerly
Medquist)
M*Modal-
Speech Q
UHC
PSN Patient Safety Net
RLA CDR
Repository
Repository.Net
PHARMACY
Carefusion
PYXIS
Connect
order imaging
Carefusion
PYXIS
Medstation
Carefusion
PYXIS Knowledge
Portal
Talyst
Barcoding
Talyst
carousel
Carefusion
PYXIS Narcotic
C2 safe
MediSpan
medication history
Pharm
OneSource
PSCAS
IP Pharm
PSCAS
OP Pharm
Trans-Lux
Outpatient
notification
PSCAS
webRx
PSCAS
PADI
Parata 2000
VOICE Tech
IVR
mostl Pyxis
inSignt MRI
All PSCAS
DHS
eGate
I2I
To HeLA; Expanded
H7 to i2i
LANCET TEMIS
Atlas, ICS,
Infection Control
DPSS LEADER (HWLA)
McKesson CERme
DHS
Enterprise Data
Repository (EDR)
DHS
HL7 Message Store
ACN R & I
Encounter summary sheets
(healthcare summary)
RPS referrals to be
replace by eConsult
ISD eCaps
Saga E-mHub
ISD HMMS
TLC Total Living Choices
Discharge planner
RLA IN HOUSE
Ambulatory
Care
Dashboard
Drug Utilization
Evaluation Tracking
System
Rancho Surgical
Ledger System
Rtis.net
Case
Management
Continuity of
Care
EnvServices.Net
environmental
Death
Certificate
Database
Medical
Credential
Management
System
TAR.net
Treatment
authorization
request
Diabetes
Tracking
System
Patient
Advocate
Deficiencies
Wheelchair
Tracking System
Stand Alone Systems
Dupon
Nuclear
medicine data
collection
JACHO
Standard
On-Call
Calendar
Dialog Medical
iMedConsent
Liver Tumor
Registry
UHC Patient Core
Measure
eSignout.com
Physician notes
Medi-Cal TAR
Treatment
authorization request
Watchmate
HWDC
MEDS eligibility
ORSA
Outpatient reduce cost
Legends
not
known
replaced
Interim than
replaced
stand alone
interfaced
DHS WIDE
Medical Records
Medical Records Index (MRI)
Medical Records Control (MRC)
Medical Records Abstracting (MRA)
Clinical Documentation
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Activity Charting (AC)
Version: 1.7
Date:Aug 2012
Location:
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Comments regarding this chart contact Spomenka Zeljkovic (213) 988-7124

Exhibit N (Additional Hosting Services Terms and Conditions)

to the

Electronic Health Records System and Services Agreement

EXHIBIT N

Additional Hosting Services Terms and Conditions

Cerner Corporation ("**Contractor**") provides Hosting Services, as further described in Section 1(a) (Scope of Services) of Exhibit N.1 (Hosting Services). The County of Los Angeles ("**County**") desires to obtain the Hosting Services from Contractor, on the condition that the provisions of this Exhibit N (Additional Hosting Services Terms and Conditions) are deemed a part of and incorporated by reference into the Electronic Health Records System and Services Agreement dated December 21, 2012 by and between Contractor and County (the "**Agreement**"). Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. SERVICES

1.1 IN GENERAL

During the Term of the Agreement, Contractor shall provide County with the Hosting Services set forth in the Agreement, Exhibit N.1 (Hosting Services), and the Statements of Work. In providing the Hosting Services, Contractor shall achieve the Service Levels and performance standards set forth in Exhibit E (Service Levels and Performance Standards), the relevant Statements of Work, and this Agreement (collectively, the "**Service Levels**").

1.2 ATTRIBUTION AND DISCLOSURES

County may, but is not required to, include such screen credits and/or disclosures for Contractor on the web site as County deems necessary or desirable in its sole discretion to distinguish and disclose Contractor's role under the Agreement and as appropriate under applicable state and federal laws. Otherwise, County will be under no obligation to provide attribution to Contractor unless otherwise stated within an applicable Exhibit to the Agreement or a marking identifying the work as a copyrighted item. The content of any terms and conditions presented to users of the Services shall be controlled solely by County. In the event of a conflict between Contractor's privacy policy, if any, and the Agreement, the provisions of this Agreement shall govern.

1.3 [INTENTIONALLY DELETED]

1.4 USE OF COOKIES ON THE SERVICE

Contractor shall not use "cookies" or any other online tracking technology for purposes of discovering the identity of any users (unless Contractor is specifically authorized hereunder to obtain such information) or tracking the activities of a user after they leave the Hosting Services. Information collected from cookies shall constitute County Confidential Information and shall be subject to the protections provided in Section 4 (Confidentiality) of this Exhibit N (Additional Hosting Services Terms and Conditions) and Section 19 (Confidentiality) of the Agreement. In no event shall such information be sold or otherwise made available to any third-party. Contractor shall use cookies solely for purposes of fulfilling its obligations hereunder. Contractor shall not use cookies from any third-party on its web site. A user's refusal to accept a cookie shall not preclude that user from fully utilizing the functionality of the Hosting Services. For purposes of the Agreement, a "**cookie**" shall mean a block of data that a server on the World Wide Web

stores on a client system. When a user returns to the same web site, the browser sends a copy of the cookie back to the server for administrative purposes.

2. IN-HOUSE SOLUTION

Upon County's election, Contractor agrees to make the Licensed Software, Third-Party Products, and Hardware available to County to utilize from County internal facilities or its designated third-party data center (the "**In-House Solution**"). County shall have three (3) options to elect to transition the Hosting Services to an In-House Solution and terminate the Hosting Services and AMS Services. The options shall be for open for sixty (60) days each beginning on January 1, 2018, January 1, 2020, and upon the expiration of the Initial Term. During such option periods County may elect to convert the Hosting Services to the In-House Solution for no additional license fee as to the Licensed Software. County will notify Contractor in writing of its election to transition concurrently with its notice of termination of the Hosting Services and AMS Services. Upon such notice, Contractor and County will work together to develop a migration plan and Contractor will provide County with the following: (a) the cost of required Hardware and Third-Party Products necessary to operate the In-House Solution; and (b) Optional Work necessary for the transition pursuant to a mutually agreed Statement of Work. Contractor and County will prepare an Amendment for submission to the Board with regard to all applicable In-House Solution transition issues.

In the event of such an election, (i) the license grants will continue as provided in the Agreement; (ii) any recurring fees associated with any Hosted Services and AMS Services shall stop on the date of County's Acceptance of the In-House Solution; and (iii) all other terms of the Agreement shall remain unchanged, provided that Exhibit E (Service Levels and Performance Standards) would require modifications depending on the nature of the Services terminated and/or retained by County.

Acceptance of the In-House Solution shall mean the In-House Solution is operating on the Recommended Configuration in material conformance with the Specifications. Acceptance Testing shall commence, as provided in Section 12 (Acceptance) of the Agreement, upon Contractor's written notification to County that the implementation Services described above have been completed and that the In-House Solution is ready for use by County in a Production Environment. For the purposes of this Section 2 (In-House Solution), the term "**Use**" means to copy, install, access, execute, operate, and run the In-House Solution for test, development, and production purposes. For purposes of this Section, "**Recommended Configuration**" for the In-House Solution developed upon County's election of the In-House Solution option, shall mean the computer platform(s), operating system(s), applications, interface engine, network infrastructure, connectivity, and workstation configurations recommended by Contractor for use with the In-House Solution.

3. ADDITIONAL WARRANTIES

The following language is to be added to Section 17.1 (Contractor's Warranties) of the Agreement in addition to the Warranties requirements in the Agreement.

3.1 NO DELIVERY OF SOFTWARE

Contractor represents and warrants that, in connection with Hosting Services, Contractor shall not deliver for installation on County's systems any software or programming, whether created or developed by Contractor or a third-party, except in connection with Contractor's provision of the Hosting Services or other Services under this Agreement.

3.2 ACCURACY OF RESPONSES TO CONTRACTOR QUESTIONNAIRE FOR DUE DILIGENCE PREPARATION

As of the Effective Date, Contractor represents and warrants all responses to County's Contractor Diligence and Information Security Questionnaire, attached as Exhibit Y (Contractor Diligence and Information Security Questionnaire) are true and correct and shall remain true and correct during the Term of this Agreement. In the event any Contractor response to the Contractor Diligence and Information Security Questionnaire is no longer true and correct, Contractor must, within ten (10) Business Days of learning of such change in circumstance, notify County in writing of the specific response at issue and the details relating to the change in circumstance.

3.3 SERVICES NOT TO BE WITHHELD OR SUSPENDED

Contractor represents and warrants that, provided County continues to timely make all undisputed payments, during the Term of this Agreement, Contractor will not withhold or suspend Hosting Services provided hereunder, for any reason, including but not limited to a Dispute between the Parties arising under this Agreement.

4. CONFIDENTIALITY

The following language is to be added to Section 19 (Confidentiality) of the Agreement in addition to the confidentiality requirements in Agreement.

4.1 SOLICITATION OF COUNTY USERS

During the Term of the Agreement and thereafter in perpetuity, Contractor agrees not to use Personal Data, whether directly or indirectly, to target or solicit County users or those of its subsidiaries, affiliates, and joint ventures, as such, on behalf of itself or any third-party, including but not limited to, on behalf of entities that provide healthcare related services in direct competition with County or commit any other act, or assist others to commit any other act, which might injure the business of County. Contractor agrees that it will not use or sell to others lists containing information obtained in connection with this Agreement about any County users. Nothing contained herein shall preclude Contractor from providing services to any County user who independently contacts Contractor, who is responding to a general solicitation of Contractor, or is contacted by Contractor based on information independently derived by Contractor.

4.2 COUNTY DATA

For the avoidance of doubt, all County Data shall be treated by Contractor as Confidential Information under this Agreement even if such County Data, or portions thereof, would otherwise fall under one or more of the foregoing exceptions.

5. SECURITY

The following language is to be added to Section 20 (Security) of the Agreement in addition to the security requirements in the Agreement.

5.1 STORAGE OF PERSONAL DATA

All Personal Data must be stored in a physically and logically secure environment that protects it from unauthorized access, modification, theft, misuse, and destruction. In addition to the general standards set forth above, Contractor will maintain an adequate level of physical security controls over its facilities including, but not limited to, appropriate alarm systems, fire suppression, access controls (including off-hour controls) which may include visitor access procedures, security guard force, video surveillance, and staff egress searches. Further, Contractor will maintain an adequate level of data security controls, including, but not limited to, logical access controls including user sign-on identification and authentication, data access controls (e.g., password protection of your applications, data files, and libraries), accountability tracking, anti-virus software, secured printers, restricted download to disk capability, and provision for system backup.

6. [INTENTIONALLY DELETED]

7. DISASTER RECOVERY AND BUSINESS CONTINUITY

The following language is to be added to the Section 22 (Disaster Recovery/Business Continuity) of the Agreement.

7.1 DISASTER RECOVERY AND BUSINESS CONTINUITY PLAN

Contractor shall establish, implement, and maintain business continuity, recovery, and disruption avoidance procedures for those facilities where the Hosting Services will be performed and for the personnel performing the Services that conform with the Business Continuity Guidelines as described in Exhibit N.3 (Business Continuity Guidelines). Contractor shall provide County with a written copy of its DR/BC Plan as Exhibit N.2 (Disaster Recovery Plan and Business Continuity Plan) and all updates thereto during the Term of this Agreement. Any future updates or revisions to the DR/BC Plan, processes, and procedures shall be no less protective than the DR/BC Plan in effect as of the Effective Date. In addition to the requirements stated in this Section 7 (Disaster Recovery and Business Continuity), Exhibit N.3 (Business Continuity Guidelines), any recovery-specific addendums provided by County that reference this Agreement or the relevant Statements of Work may provide additional detailed specifications for recovery as appropriate to County's requirements.

The Contractor Primary Data Center and Contractor Secondary Data Center facilities consist of multiple data centers each of which are discrete areas and entirely housed within a larger

facility (buildings within a building). The Contractor Primary Data Center and Contractor Secondary Data Center:

- Are housed in facilities that are designed, built, and maintained according to the FEMA P-361 standard (Design and Construction Guidance for Community Safe Rooms), which defines a safe haven required to survive an EF-5 tornado event;
- Utilize raised floor ventilation systems;
- Utilize hundreds of floor, ceiling, and ventilation duct sensors that trigger fire suppression systems with an HFC125 dry agent and a secondary backup pre-action dry pipe sprinkler system;
- Contain dedicated power utility services necessary to maintain operations of the Hosting Environment, including electrical service and components (e.g., utility transformers serving the building and fuel storage to run emergency generators);
- Contain the telecommunications network cable rooms necessary to maintain operations of the Hosting Environment;
- Contain the Contractor's production support Immediate Response Center ("**IRC**") and Contractor's Critical Facilities Engineering team;
- Utilize exterior walls that are made of steel reinforced concrete (a minimum one (1) foot thick); and
- Utilize system of grating, tested to satisfy the FEMA-P361 standard (Design and Construction Guidance for Community Safe Rooms), to protect the air exchange portions of the roof that cover the chilled water systems and generator farms.

Further facility details regarding the Contractor Primary Data Center and Contractor Secondary Data Center are maintained on Contractor's controlled document entitled, "CTC-KC Facility Summary," which document will be provided by Contractor to County on its request and will be treated by the County as proprietary and Confidential Information. Contractor agrees to refresh and improve the Contractor data centers during the Term of this Agreement in a manner, determined by Contractor that is consistent with recognized and accepted standards for such facilities.

In the event of an unplanned interruption of the Hosting Services, Contractor's alternate data center will be invoked, with production computing systems being recovered first, followed by non-production computing systems. In an unplanned interruption of the Hosting Services, Contractor will use reasonable efforts to recover County systems as quickly as possible.

In the event of an unplanned interruption of the Hosting Services, Contractor's emergency response team will be mobilized. The EHR System backups will be used to recover the production Hosting Services in the Contractor Secondary Data Center, equipment (e.g., servers, storage) will be provisioned as quickly as possible, and recovery of County's production Hosting Services will begin. As the County's recovery processes complete, County will be notified to begin testing the recovered Hosting Services in preparation to return the Hosting Services to the end-users.

7.2 PLAN AUDIT

Contractor shall have an annual audit performed of its DR/BC Plan, and shall provide County with a summary of: (a) the results of the audit report, and (b) the corrective actions or modifications, if any, Contractor will implement in response to the audit.

7.3 PLAN TESTING

On at least an annual basis, Contractor shall test its DR/BC Plan, including activation of its backup facilities and capabilities, and review and update the DR/BC Plan accordingly. Within thirty (30) calendar days of completion of each such test, Contractor shall provide County with a summary of the test results and actions taken in response to the test of the DR/BC Plan.

7.4 ONSITE REVIEW OF CONTRACTOR FACILITIES

Upon reasonable advance written notice, County may, at its option, elect to conduct onsite reviews of Contractors' facilities for, but not limited to:

(a) assessing the viability of recovery processes, procedures, and facilities;

(b) ensuring that Contractor Personnel are fully aware and currently trained on recovery processes and procedures; and

(c) assessing the safety and soundness of primary and recovery facilities.

7.5 RECOVERY TIME REQUIREMENT

The Contractor Hosting Environment (commonly referred to by Contractor as the "Cerner Technology Center") consists of a Contractor Primary Data Center and a Contractor Secondary Data Center. In an unplanned interruption of the Hosting Services, Contractor will use reasonable efforts to recover the Hosting Services as quickly as possible.

7.6 CONTRACTOR SECONDARY DATA CENTER

As of the Effective Date, Contractor shall have a Secondary Data Center in an alternate location deemed to be geographically dispersed. The Contractor Secondary Data Center shall not be located on the same electrical power grid or same telecommunications lines or the same: (a) floodplain, (b) line of prevailing weather patterns, (c) earthquake fault zone, or (d) tsunami susceptible coastal region as the Contractor Primary Data Center. Contractor shall ensure the recovery site will be properly equipped with sufficient backup generators dedicated for the Contractor's use to support all Services, with the amount of fuel on-site that will enable the site to operate for thirty-four (34) hours or whatever the local maximum fuel storage regulations will allow. Contractor shall provide a written confirmation that it has in place written agreements with primary and backup local fuel service providers to ensure uninterrupted replenishment of Contractor's supplies. Contractor shall provide written confirmation that its local fuel suppliers are not dependent on public commercial power in order to fulfill this requirement. Contractor is committed to continuous operation of the Hosting Environment including fuel for its redundant generators, however, the specific generator load capacity in the event of an outage is dependent on the conditions and cannot be specifically identified. Contractor shall ensure that the DR/BC Plan and recovery processes and procedures support relocation of Hosting Services performed to the recovery site to meet the requirements of this Agreement and all applicable Hosting Service Levels.

7.7 [INTENTIONALLY DELETED]

7.8 BACKUP COPIES

Contractor shall create daily backup copies of all County Data and other work related to the Services and shall transmit (either electronically or via physical backup media) such copies to a backup facility each day such that the maximum data loss from the complete loss of the primary facility is no more than twenty-six (26) hours. The backup facility must be in a secured and accessible location that is geographically dispersed from the primary facility.

7.9 ALTERNATE SITES OR STORAGE FACILITIES

Contractor shall ensure that the provisions for information security, physical security, and information privacy specified in this Agreement are implemented at any alternate or backup site or storage facility and for any information transmitted between the primary site and alternate sites or storage facilities.

7.10 RIGHT TO TERMINATE

In the event Contractor fails to develop the foregoing recovery site and continuity practices described within this Section 7 (Disaster Recovery and Business Continuity) within the prescribed time, County may, in its sole discretion, terminate this Agreement without further obligation, including payment of any stranded costs.

7.11 FORCE MAJEURE NOT APPLICABLE

The provisions of Section 32.1 (Force Majeure) of the Agreement relating to events of force majeure shall not relieve Contractor of its obligations under this Section 7 (Disaster Recovery and Business Continuity).

Exhibit N.1 (Hosting Services)

to the

Electronic Health Records System and Services Agreement

EXHIBIT N.1

HOSTING SERVICES

This Exhibit, and any Statements of Work, describe the Hosting Services the Contractor shall provide to County. Except as provided in this Exhibit, capitalized terms shall have the meanings set forth in the body of the Agreement and Exhibit G (Glossary).

1. SCOPE OF SERVICES

(a) Contractor shall provide and maintain all Services necessary to host the Licensed Software from the Hosting Environment such that the EHR System shall perform as defined herein, and in accordance with the Specifications, and otherwise in accordance with this Agreement ("**Hosting Services**").

(b) Contractor shall provide Hosting Services on a 24x7x365 basis. County personnel must have the ability to submit Support Requests on a 24x7x365 basis for Hosting Services.

(c) Contractor shall maintain a Hosting Environment to support the Licensed Software as to the Version(s) being utilized by County in accordance with Section 9.7.2 (Contractor's Revisions) of the Agreement).

2. OPERATIONS AND HOSTING SERVICES

2.1 HOSTING HARDWARE MAINTENANCE

(a) Contractor shall schedule and perform maintenance, including preventive maintenance of Hosting Hardware, including, but not be limited to, the repair or replacement of all (i) non-functioning or under-performing Hosting Hardware or (ii) Hosting Hardware no longer supported by its manufacturer and used by Contractor for hosting the Licensed Software, in order to maintain the Hosting Service Levels and compatibility with the Licensed Software, and any Revisions to the Licensed Software, and/or Interfaces.

(b) Based on Hosting Hardware platforms recommended by Contractor, Contractor shall maintain compatibility of the Hosting Services and Licensed Software with new Hosting Hardware, Hosting Software, including firmware, operating system software versions, database software versions, Third-Party Products, and configurations. Contractor shall provide quality assurance, testing processes, and take corrective action in collaboration with County personnel to ensure any Licensed Software and Revisions to the Licensed Software are suitable for release. Contractor will provide application upgrades, releases, versions, etc., for all Hosting Software.

2.2 PREVENTATIVE MAINTENANCE

Contractor shall create a schedule of required preventative maintenance tasks for the Hosting Environment to ensure that the Hosting Environment and all components thereof are functioning in accordance with this Agreement. Such preventative maintenance tasks include, but are not limited to, the following:

(a) Updates, Releases, Enhancements, and Versions for Licensed Software, Interfaces, and Hosting Revisions for Hosting Software; and

(b) review of Error and other logs to ensure any maintenance required to correct any Errors and restore the Hosting Environment to normal operations is detected and performed in a timely manner and that such information is used to anticipate Errors and make proactive Hosting Error Corrections.

3. HOSTING ENVIRONMENT

Without limiting the Contractor's responsibilities described herein or otherwise in the Agreement, Hosting Services shall include the provision of a Hosting Environment to perform in accordance with the Specifications and Hosting Service Levels and shall include the following:

3.1 TECHNICAL ENVIRONMENT

(a) The Hosting Environment shall include redundant system components, including:

- Network load balancers, web Servers, application Servers, and database Servers in a redundant configuration as applies to all Production domains;
- LAN/WAN infrastructure, including networking equipment for an enterprise class data center LAN, networking equipment for connection to circuits to County facilities, connection cabling, and required peripherals; and
- Storage Area Network ("**SAN**") using Redundant Array of Independent Disk ("**RAID**") and multiple data paths for storing County's data.

(b) The Hosting Environment shall include, and Contractor shall maintain, separate domains for build, test/certification, mock/staging, training, and production. The test/certification environment shall be used to validate all Revisions to the Licensed Software and all Hosting Revisions to the Hosting Software. More than one (1) non-production domain may live on the same hardware server.

3.2 PHYSICAL ENVIRONMENT

The Hosting Environment shall include all necessary facilities and redundant Mechanical, Electronic, and Plumbing ("**MEP**") components:

(a) Electrical power infrastructure, including utility-provided electrical power, diesel generators built to support N+2 availability, an on-site fuel supply adequate to support the critical and essential load for at least thirty-four (34) hours, backup local fuel delivered by service providers to ensure uninterrupted fuel replenishment, Uninterruptible Power Supplies ("**UPS**") designed to support N+1 availability until generators are online in the event of a disruption of utility-provided power, UPS batteries, Power Distribution Units ("**PDUs**"), emergency power off systems, hydrogen sensors, power supplies, transfer switches, load banks, breaker panels, and copper cabling;

(b) Heating, ventilation and air conditioning ("**HVAC**") systems built to support N+1 availability to ensure optimal cooling to building infrastructure and all equipment locations, including ductworks, computer room air conditioners ("**CRAC**") units, condensers, cooling towers, thermostat sensors, hot and cold aisle distribution systems, and humidification systems;

(c) Plumbing systems for the routing of cabling, air, water, and fire suppression gasses;

(d) Fire protection systems, including detection and abatement systems, "cross zoned" heat detectors, fire panels, deluge systems, and gaseous system, designed in accordance with industry best practices and all National Fire Protection Association codes and standards;

(e) Raised floor systems, component racks, and cabinets; and

(f) Internet and other telecommunications connections delivered into secured, separate environments to provide multiple distribution paths.

3.3 PHYSICAL SECURITY ENVIRONMENT

The Hosting Environment shall include all necessary facilities and redundant Mechanical, Electronic, and Plumbing ("**MEP**") components:

(a) Contractor shall maintain County's Hosting Environment in Statement on Standards for Attestation Engagements ("**SSAE**") 16 certified facilities, or facilities of successor certification, with, as to each Data Center:

- Access controlled through documented procedures;
- 24x7x365 security and technical engineering staff;
- Physical access which requires government-issued picture identifications for access validation and multi-factor authentication for floor access;
- Video surveillance monitoring on a 24x7x365 basis; and
- Access monitored through internal management and logging systems.

(b) Contractor's physical environments shall be governed by strict Access Control Lists ("**ACL**") for physical access to the environments. All data and storage cabinets will be contained within Contractor's Data Centers with access only granted to those with a related job responsibility. Both Contractor's Data Centers and the facilities in which they are housed are secured with locks that require proximity cards for physical access.

(c) Contractor shall maintain comprehensive security policies, procedures, and controls to govern, support, and secure the Hosting Environment. Security policies and procedures shall be reviewed and updated on a regular basis. Contractor's security management controls shall be reviewed by an independent third-party firm, on an annual basis, following SSAE 16 or successor certification, guidelines, and format.

3.4 HOSTING ENVIRONMENT SECURITY

Contractor shall use secure technology to protect County Data, Personal Data, and other Confidential Information of County and the users of the Hosting Services in its storage and transmission between the user and the Hosting Environment, which shall include the following:

(a) Entrust Secure Socket Layer ("**SSL**") signed certificates using a minimum 128 bit encryption. Internet Protocol Security ("**IPsec**") VPN Access into the Hosting Environment is controlled either by Contractor's Aventail or Nortel VPN solutions with a minimum of 168 bit Triple Data Encryption Standard ("**3DES**").

(b) A network structure protected by redundant clustered firewalls and monitored with intrusion prevention systems. All security systems shall be from leading security industry vendors, implemented in conjunction with Contractor's third-party security firms, and validated by Contractor's separate third-party vulnerability/penetration testing firms. The firewall logs shall be reviewed weekly and analyzed proactively by enterprise security management systems to identify security threats. The Hosting Environment shall be safeguarded using Network Address Translation ("**NAT**"), Internet Protocol (IP) masquerading, port redirection, non-routable IP addressing and ACL's, multi-factor authentication, and management network segregation.

(c) Background investigations will be performed in accordance with Contractor's policies and procedures for all Contractor Personnel performing work at Contractor's sites under this Agreement. All Contractor's hosting and support staff shall go through security and privacy training prior to being provided physical access to the Contractor Primary Data Center or Contractor Secondary Data Center.

(d) Multi-factor devices to access managerial functionality within the environment for administrative access. All user access shall be monitored and managed by the Contractor's security/compliance department. All Servers, Hosting Hardware devices, software applications, user accounts, security devices, and technical services shall be fully audited and managed in real time by enterprise management and notification systems. Any account, physical, environmental, or security change shall be immediately identified and trigger a notification to all Contractor hosting and security staff. Contractor's enterprise management systems shall immediately provide an ISO compliance dashboard showing full compliance status with all applicable environmental controls.

(e) The maintenance of security by restricting access points to all production environments. Strong password rules shall be enforced and the Hosting Environment shall be constantly updated to the vendor-recommended patch levels for security. The Hosting Environment shall be hardened by disabling any non-critical ports, users, protocols, and processes, following vendor's "best practice" recommendations for security. All environmental operating systems access shall require multi-factor authentication.

(f) As a part of the CQS ("**Cerner Quality Systems**"), each Contractor organization is required to actively participate in business risk management. Risk Management requirements include: identifying and documenting business risks/hazards/threats;

determining cause, effect, probability and impact; identifying one or more mitigating activities; determining residual risks; and assigning a risk index. Contractor's approach to risk management is based on ISO standard 14971:2007, Global Harmonization Task Force ("**GHTF**") Implementation of Risk Management Principles and Activities within a QMS ("**Quality Management System**"), which is a blending of accepted industry best practices.

As per CQS policy, Contractor's organizational leadership is required to review group risk assessments at least semi-annually as part of the standard management review meeting activities. Contractor shall provide a summary of significant findings of the group risk assessments and the actions or modifications, if any, Contractor will implement in response to the assessment.

(g) Extensive change management policies, procedures, and controls. All non-routine environment changes shall require approvals, extensive testing, and full documentation prior to being implemented within the Hosting Environment.

(h) Extensive incident management and monitoring procedures for the Hosting Environment. Contractor shall notify County of any attacks, service interruption, or threatened or suspected breach of security against the Servers and/or Hosting Services in accordance with the requirements of this Agreement, Exhibit E (Service Levels and Performance Standards), and Exhibit F (Business Associate Agreement).

3.5 HOSTING REVISIONS

(a) Contractor shall implement Hosting Revisions in the Hosting Environment on a regular basis, provided Contractor shall not knowingly implement such Hosting Revisions if the Hosting Revisions could adversely impact performance of the EHR System without direct coordination with the County Project Manager.

(b) Other than the Hosting Services fee, there shall be no other change or cost to County associated with Hosting Revisions.

(c) Any Hosting Revisions are expected to comply with federal and state laws and regulations at no additional cost over the monthly Hosting Services fee for Hosting Services under the Agreement.

(d) Contractor shall provide County with Hosting Revisions, revised related Documentation, and, if necessary, modified procedures, to correct any failure of the Hosting Environment to operate in accordance with the Specifications.

3.6 HOSTING HARDWARE REFRESH SERVICES

Throughout the Term, Contractor shall review at least once every twelve (12) calendar months the performance of the Hosting Environment to determine the need for Refresh Services to the Hosting Hardware currently being used to provide the Hosting Services. Contractor shall provide all Hosting Services required to implement this Section 3.6 (Hosting Hardware Refresh Services) at no additional charge to County except to the extent included in Exhibit C (Fees; Contractor Professional Services

Rates) or as otherwise approved in a Statement of Work. Contractor will upgrade and replace all Hosting Hardware in accordance with (a) the technical architecture and standards and timeframes required pursuant to any Statement of Work, and (b) as otherwise required to deliver the Hosting Services in accordance with this Agreement. The Services provided pursuant to this Section 3.6 (Hosting Hardware Refresh Services) are collectively referred to as "**Refresh Services**" and require County Approval prior to implementation.

Exhibit N.2 (Disaster Recovery Plan and Business Continuity Plan)

to the

Electronic Health Records System and Services Agreement

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Exhibit N.3 (Business Continuity Guidelines)

to the

Electronic Health Records System and Services Agreement

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transmitted without the express written consent of Gemer.

Proprietary and Confidential

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Exhibit O (County Required Forms)

to the

Electronic Health Records System and Services Agreement

The following Exhibits are attached to this Appendix O (County Required Forms) and are hereby incorporated by reference:

Exhibit O-1	Proposer's Organization Questionnaire/Affidavit
Exhibit O-2	Prospective Contractor References
Exhibit O-3	Prospective Contractor List of Contracts
Exhibit O-4	Prospective Contractor List of Terminated Contracts for Non-Performance
Exhibit O-5	Certification of No Conflict of Interest
Exhibit O-6	Familiarity with the County Lobbyist Ordinance Certification
Exhibit O-7	CBE Firm/Organization Information Form
Exhibit O-8	Proposer's Equal Employment Opportunity (EEO) Certification
Exhibit O-9	Attestation of Willingness to Consider GAIN/GROW Participants
Exhibit O-10	County of Los Angeles Contractor Employee Jury Service Program Certification Form and Application for Exception
Exhibit O-11	Certification of Independent Price Determination and Acknowledgment of RFP Restrictions
Exhibit O-12	Certification of Compliance with the County's Defaulted Property Tax Reduction Program

EXHIBIT O-1

PROPOSER'S ORGANIZATION QUESTIONNAIRE/AFFIDAVIT

Please complete, date and sign this form and place it as the first page of your proposal. The person signing the form must be authorized to sign on behalf of the Proposer and to bind the applicant in a Contract.

1. If your firm is a corporation or limited liability company (LLC), state its legal name (as found in your Articles of Incorporation) and State of incorporation:

Cerner Corporation	Delaware	1986
Name	State	Year Inc.

2. If your firm is a limited partnership or a sole proprietorship, state the name of the proprietor or managing partner:

   Cerner Corporation is a sole proprietorship

3. If your firm is doing business under one or more DBA's, please list all DBA's and the County(s) of registration:

Name	County of Registration	Year became DBA
Not applicable.		

4. Is your firm wholly or majority owned by, or a subsidiary of, another firm? Cerner is a wholly owned. If yes,

   Name of parent firm: Not applicable

   State of incorporation or registration of parent firm: Not applicable

5. Please list any other names your firm has done business as within the last five (5) years.

Name	Year of Name Change
Cerner has not changed names, not applicable.	

6. Indicate if your firm is involved in any pending acquisition/merger, including the associated company name. If not applicable, so indicate below.

As a public company, Cerner is not permitted to disclose any such information in advance of a public announcement

Proposer acknowledges and certifies that it meets and will comply with all of the Minimum Mandatory Requirements listed in Appendix T (Minimum Mandatory Requirements), of this Request for Proposals.

Check the appropriate boxes:

x **Yes** ☐ **No** _____ years experience, within the last ___ years

Proposer further acknowledges that if any false, misleading, incomplete, or deceptively unresponsive statements in connection with this proposal are made, the proposal may be rejected. The evaluation and determination in this area shall be at the Director's sole judgment and his/her judgment shall be final.

Proposer's Name:

Cerner Corporation

Address: 2800 Rockcreek

North Kansas City

E-mail address: mnaughton@cenrer.com _____ Telephone number: 816-201-1989

Fax number: 816-571-1989

On behalf of Cerner Corporation (Proposer's name), I Marc Naughton (Name of Proposer's authorized representative), certify that the information contained in this Proposer's Organization Questionnaire/Affidavit is true and correct to the best of my information and belief.

Signature

Internal Revenue Service
Employer Identification Number

EVP & Chief Financial Officer
Title

California Business License Number

March 1, 2012
Date

County WebVen Number

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Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

EXHIBIT O-4

PROSPECTIVE CONTRACTOR LIST OF TERMINATED CONTRACTS FOR NON-PERFORMANCE

Proposer's Name: Cerner

List all contracts terminated (not expired) within the last five (5) years with the reason for termination. Use additional sheets if necessary.

Cerner does not keep specific records compiling and documenting the reasons for terminations, but generally a very small percentage of Cerner clients have de-installed a system, or some subpart thereof. These situations have generally involved one of the following scenarios or situations: a change in client information technology strategy; modifications to the Client Project Plan's implementation timetable; an acquisition of the client by another hospital or hospital system (where, for example, the acquiring organization extends its own clinical information management system into the client facility operating a Cerner System); or a deterioration in the client's own business environment or financial situation (for example, where a computerized clinical information management system is no longer needed or affordable).

1. Name of Firm	**Address of Firm**	**Contact Person/Title**	**Telephone #**	**Fax #**
Please see text above.			( )	( )
Name or Contract No.	Reason for Termination:			
2. Name of Firm	**Address of Firm**	**Contact Person/Title**	**Telephone #**	**Fax #**
Please see text above.			( )	( )
Name or Contract No.	Reason for Termination:			
3. Name of Firm	**Address of Firm**	**Contact Person/Title**	**Telephone #**	**Fax #**
Please see text above.			( )	( )
Name or Contract No.	Reason for Termination:			

4. Name of Firm	Address of Firm	Contact Person/Title	Telephone #	Fax #
Please see text above.			( )	( )
Name or Contract No.	Reason for Termination:			

Provide the company name, contact person, and telephone number of at least three (3) customers who have elected not to renew Proposer's services, or who have terminated any such agreement for any reason.

1. Name of Firm	Address of Firm	Contact Person/Title	Telephone #	Fax #
Please see text above.			( )	( )
Name or Contract No.				
2. Name of Firm	**Address of Firm**	**Contact Person/Title**	**Telephone #**	**Fax #**
Please see text above.			( )	( )
Name or Contract No.				
3. Name of Firm	**Address of Firm**	**Contact Person/Title**	**Telephone #**	**Fax #**
Please see text above.			( )	( )
Name or Contract No.				

EXHIBIT O-5

CERTIFICATION OF NO CONFLICT OF INTEREST

The Los Angeles County Code, Section 2.180.010, provides as follows:

CONTRACTS PROHIBITED

Notwithstanding any other section of this Code, the County shall not contract with, and shall reject any proposals submitted by, the persons or entities specified below, unless the Board of Supervisors finds that special circumstances exist which justify the approval of such contract:

1. Employees of the County or of public agencies for which the Board of Supervisors is the governing body;

2. Profit-making firms or businesses in which employees described in number 1 serve as officers, principals, partners, or major shareholders;

3. Persons who, within the immediately preceding 12 months, came within the provisions of number 1, and who:

    a. Were employed in positions of substantial responsibility in the area of service to be performed by the contract; or

    b. Participated in any way in developing the contract or its service specifications; and

4. Profit-making firms or businesses in which the former employees, described in number 3, serve as officers, principals, partners, or major shareholders.

Contracts submitted to the Board of Supervisors for approval or ratification shall be accompanied by an assurance by the submitting department, district or agency that the provisions of this section have not been violated.

Cerner Corporation
Proposer Name

EVP & Chief Financial Officer
Proposer Official Title

Marc G. Naughton
Official's Signature

EXHIBIT O-6

FAMILIARITY WITH THE COUNTY LOBBYIST ORDINANCE CERTIFICATION

The Proposer certifies that:

1) it is familiar with the terms of the County of Los Angeles Lobbyist Ordinance, Los Angeles Code Chapter 2.160;

2) that all persons acting on behalf of the Proposer organization have and will comply with it during the proposal process; and

3) it is not on the County's Executive Office's List of Terminated Registered Lobbyists.

Signature: _____ Date: 03/01/2010

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EXHIBIT O-8

PROPOSER'S EQUAL EMPLOYMENT OPPORTUNITY (EEO) CERTIFICATION

Cerner Corporation
Company Name

2800 Rockcreek Parkway, North Kansas City, MO 64117
Address

43 119 6944

Internal Revenue Service Employer Identification Number

GENERAL

In accordance with provisions of the County Code of the County of Los Angeles, the Proposer certifies and agrees that all persons employed by such firm, its affiliates, subsidiaries, or holding companies are and will be treated equally by the firm without regard to or because of race, religion, ancestry, national origin, or sex and in compliance with all anti-discrimination laws of the United States of America and the State of California.

CERTIFICATION	YES	NO
1. Proposer has written policy statement prohibiting discrimination in all phases of employment.	(X)	( )
2. Proposer periodically conducts a self-analysis or utilization analysis of its work force.	(X)	( )
3. Proposer has a system for determining if its employment practices are discriminatory against protected groups.	(X)	( )
4. When problem areas are identified in employment practices, Proposer has a system for taking reasonable corrective action to include establishment of goal and/or timetables.	(X)	( )

Signature

03/01/2012
Date

Marc Naughton EVP & Chief Financial Officer
Name and Title of Signer (please print)

EXHIBIT O-9

ATTESTATION OF WILLINGNESS TO CONSIDER GAIN/GROW PARTICIPANTS

As a threshold requirement for consideration for contract award, Proposer shall demonstrate a proven record for hiring GAIN/GROW participants or shall attest to a willingness to consider GAIN/GROW participants for any future employment opening if they meet the minimum qualifications for that opening. Additionally, Proposer shall attest to a willingness to provide employed GAIN/GROW participants access to the Proposer's employee mentoring program, if available, to assist these individuals in obtaining permanent employment and/or promotional opportunities.

Proposers unable to meet this requirement shall not be considered for contract award.

Proposer shall complete all of the following information, sign where indicated below, and return this form with their proposal.

A. Proposer has a proven record of hiring GAIN/GROW participants.

_____YES (subject to verification by County) _____NO

B. Proposer is willing to consider GAIN/GROW participants for any future employment openings if the GAIN/GROW participant meets the minimum qualifications for the opening. "Consider" means that Proposer is willing to interview qualified GAIN/GROW participants.

___X__YES _____NO

C. Proposer is willing to provide employed GAIN/GROW participants access to its employee-mentoring program, if available.

_____YES _____NO _____N/A (Program not available)

Proposer Organization: Cerner Corporation

Signature: Marc Naughton

Print Name: Marc Naughton

Title: EVP & Chief Financial Officer Date: 03/01/2012

Tel. #: 816-201-1989 Fax #: 816-571-1989

EXHIBIT O-10

COUNTY OF LOS ANGELES CONTRACTOR EMPLOYEE JURY SERVICE PROGRAM CERTIFICATION FORM AND APPLICATION FOR EXCEPTION

The County's solicitation for this Request for Proposals is subject to the County of Los Angeles Contractor Employee Jury Service Program (Program), Los Angeles County Code, Chapter 2.203. All proposers, whether a contractor or subcontractor, must complete this form to either certify compliance or request an exception from the Program requirements. Upon review of the submitted form, the County department will determine, in its sole discretion, whether the proposer is excepted from the Program.

Company Name: Cerner Corporation		
Company Address: 2800 Rockcreek Parkway		
City: North Kansas City	State: MO	Zip Code: 64117
Telephone Number: 816-221-1024		
Solicitation For _____ Services:		

If you believe the Jury Service Program does not apply to your business, check the appropriate box in Part I (attach documentation to support your claim); or, complete Part II to certify compliance with the Program. Whether you complete Part I or Part II, please sign and date this form below.

Part I: Jury Service Program is Not Applicable to My Business

- ☐ My business does not meet the definition of "contractor," as defined in the Program, as it has not received an aggregate sum of $50,000 or more in any 12-month period under one or more County contracts or subcontracts (this exception is not available if the contract itself will exceed $50,000). I understand that the exception will be lost and I must comply with the Program if my revenues from the County exceed an aggregate sum of $50,000 in any 12-month period.

- ☐ My business is a small business as defined in the Program. It 1) has ten or fewer employees; and, 2) has annual gross revenues in the preceding twelve months which, if added to the annual amount of this contract, are $500,000 or less; and, 3) is not an affiliate or subsidiary of a business dominant in its field of operation, as defined below. I understand that the exception will be lost and I must comply with the Program if the number of employees in my business and my gross annual revenues exceed the above limits.

  "Dominant in its field of operation" means having more than ten employees and annual gross revenues in the preceding twelve months, which, if added to the annual amount of the contract awarded, exceed $500,000.

  "Affiliate or subsidiary of a business dominant in its field of operation" means a business which is at least 20 percent owned by a business dominant in its field of operation, or by partners, officers, directors, majority stockholders, or their equivalent, of a business dominant in that field of operation.

- ☐ My business is subject to a Collective Bargaining Agreement (attach agreement) that expressly provides that it supersedes all provisions of the Program.

OR

Part II: Certification of Compliance

- ☒ My business has and adheres to a written policy that provides, on an annual basis, no less than five days of regular pay for actual jury service for full-time employees of the business who are also California residents, **or** my company will have and adhere to such a policy prior to award of the contract.

I declare under penalty of perjury under the laws of the State of California that the information stated above is true and correct.

Print Name: Marc Naughton	Title: EVP & Chief Financial Officer
Signature:	Date: November 12, 2012

EXHIBIT O-11

CERTIFICATION OF INDEPENDENT PRICE DETERMINATION AND ACKNOWLEDGEMENT OF RFP RESTRICTIONS

A. By submission of this Proposal, Proposer certifies that the prices quoted herein have been arrived at independently without consultation, communication, or agreement with any other Proposer or competitor for the purpose of restricting competition.

B. List all names and telephone number of person legally authorized to commit the Proposer.

NAME	PHONE NUMBER
Marc Naughton	816-201-1989

NOTE: Persons signing on behalf of the Contractor will be required to warrant that they are authorized to bind the Contractor.

C. List names of all joint ventures, partners, subcontractors, or others having any right or interest in this contract or the proceeds thereof. If not applicable, state "NONE".

D. Proposer acknowledges that it has not participated as a consultant in the development, preparation, or selection process associated with this RFP. Proposer understands that if it is determined by the County that the Proposer did participate as a consultant in this RFP process, the County shall reject this proposal.

Cerner Corporation
Name of Firm

Marc Naughton — EVP & Chief Financial Officer
Print Name of Signer — Title

Signature — Date

EXHIBIT O-12

CERTIFICATION OF COMPLIANCE WITH THE COUNTY'S DEFAULTED PROPERTY TAX REDUCTION PROGRAM

Company Name: Cerner Corp		
Company Address: 2800 Rockcreek Parkway		
City: North Kansas City	State: MO	Zip Code: 64117
Telephone Number: 816-221-1024	Email address: clientcarecenter@cerner.com	

The Proposer certifies that:

☒ It is familiar with the terms of the County of Los Angeles Defaulted Property Tax Reduction Program, Los Angeles County Code Chapter 2.206; AND

To the best of its knowledge, after a reasonable inquiry, the Proposer is not in default, as that term is defined in Los Angeles County Code Section 2.206.020.E, on any Los Angeles County property tax obligation; AND

The Proposer agrees to comply with the County's Defaulted Property Tax Reduction Program during the term of any awarded contract.

OR

☐ I am exempt from the County of Los Angeles Defaulted Property Tax Reduction Program, Pursuant to Los Angeles County Code Section 2.206.060, for the following reason:

_____

_____

I declare under penalty of perjury under the laws of the State of California that the information stated above is true and correct.

Print Name: Marc Naughton	Title: EVP & Chief Financial Officer
Signature:	Date: 03/01/2012

Exhibit P (Form Statement of Work)

to the

Electronic Health Records System and Services Agreement

Exhibit A.[Insert SOW Number] ([Insert SOW Name] Statement of Work)

to the

Electronic Health Records System and Services Agreement

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Revision History

Date	Revision #	Description	Author
[Change date]	*[Revision]*	*[Describe what was changed, added, or deleted]*	*[Who made the changes]*

This Statement of Work ("**SOW**") is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (hereinafter "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. In the event of conflicting terms between the Agreement and this SOW, the terms of the Agreement shall prevail and nothing in this SOW shall modify or amend any provisions of the Agreement (including all components such as Statements of Work, Service Level Agreements, Exhibits, etc.) unless such modifications or amendments and the provisions of the Agreement which they modify or amend are specifically identified in this SOW and are Approved. This SOW includes any attachments hereto. Any capitalized terms not defined in this SOW shall have the same meanings as used in the Agreement. Changes to this SOW will be processed in accordance with the change management procedures as outlined in the Agreement.

All of the tasks, subtasks, Deliverables, goods, and other services required or requested by County below are included as part of the Services.

This SOW provides a description of the nature of the work required, but does not provide an exhaustive list of every task or subtask necessary for completion of this Exhibit A.[_] ([Insert SOW Name] Statement of Work).

1. Business Case/Business Objectives Supported

[This section should concisely state the business, operational, or other benefits and business objectives supported by this Work Segment.]

2. Project Summary

2.1 Project Summary

[Briefly provide a summary of the project explaining services, timeline, where Services will be performed, and other general requirements.]

2.2 Critical Success Factors

[This section should concisely state the factors that are critical to the success of this project.]

2.3 Commencement Date and Termination Date

[Identify the commencement and termination dates for this Statement of Work, per Section 1.3 (Term of Statements of Work; License Term) of the Agreement.]

2.4 Deliverable Development and Approval Process

This section specifies a repeating process for developing Deliverables for this SOW. Each Deliverable shall be developed in accordance with the following Contractor's obligations, which shall be sub-tasks to each individual task:

(1) All Deliverables must be developed in the form and format agreed to by County and Contractor using a Deliverables Expectations Document (also referred to as a "**DED**") Approved by County. No work will be performed on any Deliverable associated with a payment Milestone until the DED has been Approved by

County. As each Project Deliverable is submitted, the Contractor must include a copy of the Project DED as the cover sheet. A template to be used for each DED during this Project can be found in Attachment 1 (Project Deliverable Expectations Document (DED) Template) to this SOW.

(1) Develop agendas, and coordinate scheduling with County, for all necessary events (e.g., workshops, meetings) for the production of the Deliverable.

(2) Facilitate events (e.g., workshops, meetings) as required for the development of each Deliverable.

(3) Record and analyze the input received from all events (e.g., workshops, meetings) and distribute results or minutes for review to event participants.

(4) Prepare drafts of the Deliverable for County for review.

(5) Provide a structured process for County to provide feedback on drafts, including events, as appropriate.

(6) Compile and incorporate County feedback to the draft Deliverable and prepare a revised Deliverable.

(7) Distribute the revised Deliverable to County for review; obtain and analyze County feedback as above, and repeat if necessary.

(8) Complete a final version of the Deliverable including, prior to distribution for Approval by County, validation by Contractor that the Deliverable conforms to the Specifications and meets the Acceptance Criteria.

(9) Provide both the clinical and workflow subject matter expertise to support the completion of Deliverables.

After receipt of a Deliverable from Contractor, County shall notify Contractor in writing as to any specific changes requested (together with a reasonably detailed explanation of the reasons why the Deliverable should be modified) in as expeditious a time frame as possible given the nature of the Deliverable and the schedule. Unless a change is disputed, Contractor shall make the changes described in a timely manner so as to not adversely impact the schedule under the Project Work Plan. Upon completion of such changes, the Deliverable shall be provided to County with a request for Acceptance. County shall notify Contractor of its Acceptance or rejection in a timeframe that is practical and reasonable given the nature, criticality, and complexity associated with the Acceptance Testing/review.

3. Detail of Services Required

[This section should concisely communicate the Services to be completed by Contractor.]

3.1 Tasks

[Identify and describe the tasks necessary to support the project, including (a) a description of all subtasks and deliverables; (b) resources required for tasks (with names

for the critical resources detailed whenever possible); (c) estimated hours per task; and (d) scheduled beginning and end dates.]

.

Phase 1 ([Title]) *[Identify the project phase in which the work will be completed]*			
Task 1 **([Title])** *[Identify the task]*	**Personnel Requirements**	**Time Commitment**	**Scheduled Beginning and End Dates**
	[Identify the personnel required by roles / titles]	*[Identify the time commitment to complete the work]*	*[Enter beginning date and end date for completion of the task]*
	[Insert the task description]		
	Subtask 1.1 ([Title]) *[Identify the subtask and insert the subtask description]*		
	Deliverable 1.1 ([Title]) *[Identify the deliverable(s) under the subtask and insert the description of each deliverable]*		
	Subtask 1.2 ([Title]) *[Identify the subtask and insert the subtask description]*		
	Deliverable 1.2 ([Title]) *[Identify the deliverable(s) under the subtask and insert the description of each deliverable]*		
	…		
Task 2 **([Title])** *[Identify the task]*	**Personnel Requirements**	**Time Commitment**	**Scheduled Beginning and End Dates**
	[Identify the personnel required by roles / titles]	*[Identify the time commitment to complete the work]*	*[Enter beginning date and end date for completion of the task]*
	[Insert the task description]		
	Subtask 2.1 ([Title]) *[Identify the subtask and insert the subtask description]*		
	…		

3.2 Key Deliverables Table

[Identify the Key Deliverables (see Section 9.3.2 (Key Deliverables) of the Agreement). These are the Deliverable marked as "Key" under the applicable Exhibit A.25 (Project Control Document).]

Number	Key Deliverable	Responsibility	Due Date
[List Key Deliverable number]	*[List the Key Deliverable to be created by Contractor]*	*[Identify the person(s) and role(s) who is/are responsible for the completion of the Key Deliverable]*	*[Identify the end date for completion of the Key Deliverable]*

3.3 Key Milestones

[Identify Key Milestones to be achieved by Contractor (see Section 15.6(a) (Holdbacks) of the Agreement).]

3.4 Support

[Describe any additional support and maintenance services to be provided by Contractor, per Section 9.7 (Support Services) of the Agreement.]

3.5 Service Levels

[Indicate any additional Service Levels requirements for Contractor, per Section 11 (Service Levels) of the Agreement.]

3.6 Training

[Describe training to be provided by Contractor, per Section 9.5.2 (Training) of the Agreement.]

4. Technology

[List both the hardware and software required to develop this Project and any constraints that are imposed by Project hardware and software.]

4.1 Software Requirements

[List all software requirements, including any Licensed Software, identified by Module (including Interfaces to be developed and delivered by Contractor, per Section 9.6 (Interfaces) of the Agreement); Third-Party Products With Independent Conditions to be provided by Contractor, per Section 7 (Third-Party Products With Independent Conditions) of the Agreement; operating systems or other software embedded in any Hardware provided by Contractor; etc.]

4.2 Hardware Requirements

[List all hardware requirements, including any new hardware or other equipment to be purchased from Contractor, per Section 8 (Hardware) of the Agreement. Include (a) all applicable fees and costs, and (b) the delivery date.]

4.3 Sunset Activities

[List software/hardware being sunset as a result of project.]

Software / Hardware Description	Affected End User Community	IT Group Owner	Committed Sunset Date	Write-off or Accelerate Depreciation?	Book Value	Annual Cost of Support/ Maintenance

4.4 Third-Party Intellectual Property

[Identify intellectual property licensed, made, conceived, or developed by a third-party and to be provided by Contractor to County, per Section 7 (Third-Party Products With Independent Conditions) of the Agreement. Include (a) a list that specifically identifies all Third-Party Products With Independent Conditions; (b) the owner of the Third-Party Products With Independent Conditions; (c) Contractor's authority to include the Third-Party Products With Independent Conditions in the Licensed Software, Deliverables, or Services; and (d) any restrictions or royalty terms applicable to the use of the Third-Party Products With Independent Conditions, including a copy of any third-party license agreements that are applicable to County.]

5. Project Control Document

Contractor shall perform the Services and provide the associated Deliverables in accordance with the attached Project Control Document, which at a minimum shall include the following information:

(a) A Project Work Plan ("**PWP**"), developed in County-specified version of Microsoft Project, which shall include:
- (i) Deliverables, Tasks, and Subtasks;
- (ii) Associated dependencies among Deliverables, Tasks, and Subtasks,
- (iii) Resources assigned to each Deliverable, Task, and Subtask,
- (iv) Start date and date of completion for each Deliverable, Task, and Subtask,
- (v) County review period for each Deliverable, and
- (vi) Milestones and Key Milestones;

(b) A comprehensive Error Management Plan ("**EMP**") documenting the approach to Error management, including methodology, recommended tool(s) and escalation process;

(c) Approach to project communications;

(d) A comprehensive Risk Management Plan ("**RMP**") documenting the approach to risk analysis (e.g., the evaluation of risks and risk interactions to assess the range of possible Project outcomes), risk mitigation (e.g., the identification of ways to minimize or eliminate Project risks), a process and frequency for assessing established risk analysis and mitigation approaches, risk tracking/control (e.g., a method to ensure that all steps of the risk management process are being followed and, risks are being mitigated effectively), and a process for risk communication to County and within Contractor's organization and escalation. The RMP shall have a clearly established process for

problem escalation and shall be updated, as needed, through the term of the Agreement;

(e) Project staffing and resource management plan; and

(f) Configuration and Change Management Plan ("**CCMP**"). Changes, in this context, refer to changing the functionality of or adding additional functionality (e.g., changes to the project scope) to any Licensed Software component. The approach shall ensure that the impacts and rationale for each change are analyzed and coordinated prior to being approved. The CCMP may vary from item to item, as determined by the County Project Director.

6. Acceptance

6.1 Acceptance Criteria

Unless explicitly provided in this SOW, the Acceptance Criteria shall be as defined in the Agreement.

[Optional: List any additional Acceptance Criteria that applies.]

6.2 Acceptance Test

[Describe testing at various stages of the implementation of the Licensed Software, specify the timing for testing, and specify County or Contractor responsibility for testing as appropriate, per Section 12.2 (Acceptance Tests) of the Agreement.]

7. Contractor Roles and Responsibilities

[List the roles, name, contact information, and responsibilities of the Contractor Personnel that will be assigned to the project, including the Contractor Project Manager under this Statement of Work, per Section 10.1.2 (Contractor Project Manager) of the Agreement.]

Resource Title	Name	Contact Information	Responsibilities
Contractor Project Manager	*[Enter full name]*	*[Enter business address, phone, and e-mail address]*	*[Enter description of responsibilities]*
[Enter resource title]	*[Enter full name]*	*[Enter business address, phone, and e-mail address]*	*[Enter description of responsibilities]*
…			

8. County Resource Impacts

[Describe, if any, the impact on County resources and what specialized skills and responsibilities will be required for each category below.]

8.1 County Project Manager

The County Project Manager is …

[Identify the County representative under this Statement of Work, per Section 10.1.3 (County Project Manager) of the Agreement.]

8.2 Specialized Skills Required from County IT

[Insert description.]

8.3 Specialized Skills Required from the County Clinical Personnel

[Insert description.]

8.4 Specialized Skills Required from the County Business Personnel

[Insert description.]

8.5 County Responsibilities

[Insert description.]

9. Completion

9.1 Completion Criteria

Contractor has fulfilled its obligations under this SOW when one of the following first occurs:

(a) County provides acceptance pursuant to Section 6 (Acceptance) of this SOW.; or

(b) this SOW or the Agreement is terminated in accordance with Section 29 (Termination) of the Agreement, except for material breach by Contractor.

9.2 Project Closing Sign Off Procedure

[Describe the project closing and sign off procedure.]

10. Payment

[Applicable to Professional Services, as set forth in Section 14.6.2 (Professional Services) of the Agreement.]

10.1 Fees

[Describe the fee arrangement (e.g., fixed fee, not to exceed, time and materials) by selecting one option from below, or describe the applicable customized and/or combination approach.

[Option 1 – Fixed Fee]

*The total fees to be paid by County to Contractor for any Services, Deliverables, or work performed pursuant to this SOW shall be USD $_____.00 (the "**Fixed Fee**"). For the avoidance of doubt, Contractor agrees that this is a fixed fee arrangement in which Contractor, subject to the other limitations in this SOW, will provide all services necessary to perform the Services and provide the Deliverables described in this SOW for the Fixed Fee specified herein, regardless of the actual number of hours required by Contractor to perform such Services or provide the Deliverables. An estimated percentage allocation of the Fixed Fee amount for each milestone is set forth below: …[Include an estimated percentage allocation of the fixed fee amount for each milestone, per Section 14.6.2(a) (Fixed Fee or Not to Exceed) of the Agreement.]*

[Option 2 – Not to Exceed]

*The total fees to be paid by County to Contractor for any Services, Deliverables, or work performed pursuant to this SOW shall not exceed USD $_____.00 (the "**Not To Exceed Price**"), pursuant to the rates set forth in Exhibit C (Fees; Contractor Professional Services Rates). For the avoidance of doubt, County agrees that this is a not to exceed arrangement in which Contractor, subject to the other limitations in this SOW, will perform the Services and provide the Deliverables described in this SOW. An estimated percentage allocation of the Not To Exceed Price amount for each milestone is set forth below: …[Include an estimated percentage allocation of the not to exceed price amount for each milestone, per Section 14.6.2(a) (Fixed Fee or Not to Exceed) of the Agreement.]*

[Option 3 –Time and Materials (T&M)]

County will be billed on a time and materials basis pursuant to the rates set forth in Exhibit C (Fees; Contractor Professional Services Rates) based upon the actual effort expended in providing the Services and in accordance with the payment schedule attached. Pursuant to Section 14.6.2(b) (Time and Materials) of the Agreement, Contractor estimates that the fees to complete the Services under this SOW are USD $_____.00. The foregoing represents Contractor's best, good faith estimate of the fees required to perform the work described in this SOW. In the event it is anticipated that the fee estimate will be exceeded, Contractor will provide written notice to County in advance of incurring such excess cost, as set forth in Section 14.6.2(b) (Time and Materials) of the Agreement.

10.2 Invoices

Invoices will be sent to County in accordance with the invoicing requirements described in Section 15 (Invoices and Payments) of the Agreement.

10.3 Expenses

[Identify any reimbursable expenses, per Section 15.7 (Responsibility for Costs) of the Agreement, and any travel and living expenses, per Section 15.8 (Travel and Living Expenses) of the Agreement.]

Out-of-pocket expenses for travel including airfare parking, mileage, rental cars, taxi, fuel, lodging and per diem will be in addition to the professional fees set forth in Section 10.1 (Fees), will be billed at Contractor's direct cost without mark-up, and will be subject to Section 15.8 (Travel and Living Expenses) of the Agreement.

Based upon a project start date on or before *[Moh DD, YYYY]*, Contractor's "Not to Exceed" expense budget shall be *USD $_____.00*.

11. Changes

No changes to this SOW shall be effective without prior County Approval, and any changes to the terms of this SOW shall be subject to Section 13 (Changes to Agreement) of the Agreement.

12. Dependencies

[List any dependencies outside the Contractor Project Manager's control, both external and internal (e.g., activities to be carried out by a Subcontractor or third party vendor, or a needed resource that will not be available until another project is completed).]

13. Risks and Risk Mitigation

[Identify likely risks that could impact the project, including potential impacts to the project timeline, resources, and costs.]

Potential Risk	Mitigation Strategy/ Contingency Plan	Probability of Risk (%)	Consequence	Amount at Risk
[Enter potential Project risks]	*[Enter the mitigation strategy and/or contingency plans]*	*[Enter the probability of the risk materializing]*	*[Enter the consequence should the risk materialize (timeline extension, additional resource requirements, etc.)]*	*[Enter an estimate for the amount at risk]*

14. Attachments

[Include any attachments to further clarify the work to be completed and include resumes of resources.]

Attachment 1 (Project Delivery Document)

IN WITNESS WHEREOF, the Parties have executed this SOW to become effective as of _____.

COUNTY OF LOS ANGELES ("County")	**CERNER CORPORATION ("Contractor")**
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

Attachment 1 - Project Deliverable Expectations Document (DED) Template

Project Deliverable Expectations Document	
Project Deliverable Number:	**Title of Deliverable:**
Deliverable Description:	Contract/SOW Reference:
Frequency:	Initial Draft Submission Due Date:
County's Review of Draft Deliverable: [XX] Days	Final Submission Due Date: [XX] Days after receipt of draft comments
County Approval Required: Yes/No	Distribution: County Project Manager – 1 hard copy and 1 soft copy County Project Oversight – 1 soft copy
Contractor: Complete shaded area below	
Detailed Deliverable Outline:	
Deliverable Acceptance Criteria (include agreed upon requirements, format and contents, related to Deliverable):	
Prepared By (please print):	Date Submitted:
Date Submitted 2:	Date Submitted 3:
Phone Number:	E-mail:
Contractor Project Director or Contractor Project Manager Signoff (For Key Deliverables):	
Contractor Representative Name:	Contractor Representative Position:
Contractor Representative Signature:	Date:
County Approval/Comments	
Approved By:	Date:
Signature:	
Comments:	

Exhibit Q (Escrow Agreement)

to the

Electronic Health Records System and Services Agreement

MASTER PREFERRED HIGH TECHNOLOGY ESCROW AGREEMENT

Master Number 0305017-00001

This MASTER PREFERRED HIGH TECHNOLOGY ESCROW AGREEMENT ("Escrow Agreement"), made and entered into this 1st day of September, 1996 ("Effective Date"), between CERNER CORPORATION, a Delaware Corporation ("Cerner"), and Data Securities International, Inc., a Delaware Corporation ("DSI"), and any Cerner Client signing the Acceptance Form attached to this Escrow Agreement ("Preferred Beneficiary"), who collectively may be referred to in this Agreement as "The Parties,"

WITNESSETH:

WHEREAS, Cerner and Preferred Beneficiary have entered into an agreement referred to in this Escrow Agreement as the "Cerner System Agreement" pursuant to which Cerner will license to Preferred Beneficiary the use of certain computer software programs for use in the healthcare industry (the "Licensed Software"), and

WHEREAS, a High Technology Escrow Agreement providing a basic level of protection has already been established by Cerner with a third party for the benefit of Cerner's client base, and

WHEREAS, certain clients of Cerner have expressed a desire for an additional escrow arrangement that would provide both a higher level of basic protection and a menu of additional services, both of which could be purchased by such clients at an additional charge, and

WHEREAS, in order to meet the needs of such clients as described in the recital immediately preceding, Cerner desires to deposit in escrow the source codes and documentation (collectively, the "Source Code") for the Licensed Software so that such Source Code will be available to Preferred Beneficiary as set forth in this Escrow Agreement in the event Cerner ceases doing business or supporting the Licensed Software, and

WHEREAS, Cerner desires to establish for the benefit of the Preferred Beneficiary this Escrow Agreement, and

WHEREAS, the parties desire this Escrow Agreement to be supplementary to the Cerner System Agreement pursuant to 11 United States Code, Section 365(n), relating to a licensee's rights against a bankruptcy trustee with respect to executory contracts involving license rights to intellectual property, and

WHEREAS, DSI is willing to act as escrow agent under the terms and conditions hereinafter set forth,

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements hereinafter set forth, Cerner and DSI hereby agree as follows:

1. ESCROW DEPOSIT. Cerner hereby deposits with DSI for the benefit of the Preferred Beneficiary the Source Code for the Licensed Software in its current (and, at Cerner's option, certain prior) versions. Cerner further agrees, for the benefit of the Preferred Beneficiary, to deposit within thirty days after their first commercial release, the Source Code of any new versions of the Licensed Software and agrees not less often than once each year to deposit with DSI a complete version of the Source Code

encompassing all error corrections improvements and modifications made by Cerner to the Licensed Software. Cerner and DSI hereby agree that the property escrowed with DSI (the "Escrowed Property") shall be held and disposed of by DSI in accordance with the terms and provisions hereof.

2. LABEL OF ESCROWED PROPERTY. Prior to the delivery of the Escrowed Property to DSI, Cerner shall conspicuously label for identification each document, magnetic tape, disk or other tangible media upon which the Escrowed Property are written or stored. Additionally, Cerner shall complete an Exhibit B, with respect to both the initial and all subsequent deposits, to list each such tangible item of media by the item label description, the type of media and the quantity. The Exhibit B must be signed by Cerner and delivered to DSI with the Escrowed Property. Unless and until Cerner makes the initial deposit of the Escrowed Property with DSI, DSI shall have no obligation with respect to this Agreement, except the obligation to notify the parties regarding the status of the Escrowed Property as required in paragraph 9 below.

3. DEPOSIT INSPECTION. When DSI receives the Escrowed Property and the Exhibit B, DSI will conduct an inspection of the Escrowed Property by visually matching the labeling of the tangible media containing the Escrowed Property to the item descriptions and quantity listed on the Exhibit B. In addition to the inspection of the Escrowed Property, Preferred Beneficiary may elect to cause a verification of the Escrowed Property in accordance with Section 6 below.

4. ACCEPTANCE OF DEPOSIT. At completion of the inspection of the Escrowed Property, if DSI determines that the labeling of the tangible media matches the item descriptions and quantity on Exhibit B, DSI will date and sign the Exhibit B and mail a copy thereof to Cerner and Preferred Beneficiary. If DSI determines that the labeling does not match the item descriptions or quantity on the Exhibit B, DSI will (a) note the discrepancies in writing on the Exhibit B; (b) date and sign the Exhibit B with the exceptions noted, and (c) provide a copy of the Exhibit B to Cerner and Preferred Beneficiary. DSI's acceptance of the Escrowed Property occurs upon the signing of the Exhibit B by DSI. Delivery of the signed Exhibit B to Preferred Beneficiary is Preferred Beneficiary's notice that the Escrowed Property has been received and accepted by DSI.

5. CERNER'S REPRESENTATIONS. Cerner represents as follows:

a. Cerner lawfully possesses all of the Escrowed Property deposited with DSI;

b. With respect to all of the Escrowed Property, Cerner has the right and authority to grant to DSI and Preferred Beneficiary the rights as provided in this Escrow Agreement;

c. The Escrowed Property is not subject to any lien or other encumbrance; and

d. The Escrowed Property consists of the proprietary information and other materials identified either in the Cerner System Agreement or Exhibit A, as the case may be.

6. VERIFICATION. Preferred Beneficiary shall have the right, at Preferred Beneficiary's expense, to cause a verification of any Escrowed Property, as set forth in Exhibit D to this Escrow Agreement. To the extent that Cerner becomes involved in the verification process, the Preferred Beneficiary shall also reimburse Cerner for all costs incurred by Cerner with respect to such verification (including all personnel time). A verification determines, in different levels of detail, the accuracy, completeness, sufficiency and quality of the Escrowed Property. If a verification is elected after the Escrowed Property has been delivered to DSI, then only DSI, or at DSI's election an independent person or company selected and supervised by DSI, may perform the verification.

7. DEPOSIT UPDATES. Unless otherwise provided by the Cerner System Agreement, Cerner shall update the Escrowed Property within 60 days of each commercial release of a new version of the product which is subject to the Cerner System Agreement. Such updates will be added to or shall replace the existing Escrowed Property. All updates to the Escrowed Property shall be listed on a new Exhibit B and the new Exhibit B shall be signed by Cerner. Each Exhibit B will be held and maintained separately within the escrow account. An independent record will be created which will document the activity for each Exhibit B. The processing of all updates to the Escrowed Property shall be in accordance with Sections 3 through 6 above. All references in this Escrow Agreement to the Escrowed Property shall include the initial Escrowed Property and any updates to the Escrowed Property.

8. CONFIDENTIALITY. DSI shall maintain the Escrowed Property in a secure, environmentally safe, locked receptacle which is accessible only to authorized employees of DSI. DSI shall have the obligation to reasonably protect the confidentiality of the Escrowed Property. Except as provided in this Escrow Agreement, DSI shall not disclose, transfer, make available, or use the Escrowed Property. DSI shall not disclose the content of this Escrow Agreement to any third party. If DSI receives a subpoena or other order of a court or other judicial tribunal pertaining to the disclosure or release of the Escrowed Property, DSI will immediately notify the parties to this Escrow Agreement. It shall be the responsibility of Cerner and/or Preferred Beneficiary to challenge any such order, provided, however, that DSI does not waive its rights to present its position with respect to any such order. DSI will not be required to disobey any court or other judicial tribunal order. (See Section 24 below for notices of requested orders.)

9. STATUS REPORTS. DSI will issue to Cerner and Preferred Beneficiary a report profiling the account history at least semi-annually. DSI may provide copies of the account history pertaining to this Escrow Agreement upon the request of any party to this Escrow Agreement.

10. AUDIT RIGHTS. During the term of this Escrow Agreement, Cerner and Preferred Beneficiary shall each have the right to inspect the written records of DSI pertaining to this Escrow Agreement. Any inspection shall be held during normal business hours and following reasonable prior notice.

11. TITLE TO MEDIA. Cerner hereby transfers to DSI the title to the media upon which the proprietary information and materials are written or stored. However, this transfer does not include ownership of the proprietary information and materials contained on the media, such as any copyright, trade secret, patent or other intellectual property rights.

12. RIGHT TO MAKE COPIES. DSI shall have the right to make copies of the Escrowed Property as reasonably necessary to perform with respect to rights and duties under this Escrow Agreement. DSI shall copy all copyright, nondisclosure, and other proprietary notices and titles contained on the Escrowed Property onto any copies made by DSI. With respect to all Escrowed Property submitted to DSI, Cerner shall provide any and all instructions as may be necessary to duplicate the Escrowed Property including but not limited to descriptions of the hardware and/or software needed.

13. RIGHT TO SUBLICENSE UPON RELEASE. As of the Effective Date of this Escrow Agreement, and unless Cerner has not already granted a direct license or other right for use of source code under the Cerner System Agreement between Cerner and the Preferred Beneficiary, Cerner hereby grants to DSI a non-exclusive, irrevocable, perpetual, and royalty-free license to sublicense the Escrowed Property to Preferred Beneficiary upon the release, if any, of the Escrowed Property in accordance with Section 15 below. Except upon such a release, DSI shall not sublicense or otherwise transfer the Escrowed Property.

14. DELIVERY FROM ESCROW TRIGGER EVENTS. If Preferred Beneficiary shall give written notice to DSI of the following:

a. the cessation of business by Cerner, without a successor, or

b. Cerner's cessation of the Support supplied for the Licensed Software pursuant to the Cerner System Agreement without making a provision for continued Support by a qualified third party on substantially the same terms, conditions and pricing, or

c. Cerner and Preferred Beneficiary having entered into an agreement (whether contained in the Cerner System Agreement or in some separate writing) providing other circumstances under which Preferred Beneficiary may be entitled to a copy of the Escrowed Property, and where the existence of such circumstances has been alleged, then:

DSI shall within three business days thereafter provide to Cerner at its address set forth in this Escrow Agreement a copy of said notice by Certified Mail, return receipt requested, or by commercial express mail. Unless, within thirty (30) days after the date of mailing by DSI, Cerner shall file with DSI its affidavit contesting the existence of such circumstances, DSI shall on the thirty-first day after the giving of such notice to Cerner, if such day is a business day (and if not, then on the first business day thereafter), arrange to have a competent data processing service make one copy of the Escrowed Property and deliver such copy in accordance with the Preferred Beneficiary's instructions. If an affidavit is filed by Cerner as aforesaid, then DSI

shall not deliver the Escrowed Property to either Cerner or Preferred Beneficiary until:

a. the dispute has been fully and finally adjudicated by a court of competent jurisdiction, or

b. all differences shall have been resolved by agreement of Cerner and Preferred Beneficiary and DSI shall have been notified thereof by an instrument signed jointly by Cerner and Preferred Beneficiary.

15. USE SUBLICENSE FOLLOWING RELEASE. Unless otherwise provided in the Cerner System Agreement, upon release of the Escrowed Property in accordance with Section 14, Preferred Beneficiary shall have a non-exclusive, non-transferable, irrevocable sublicensed right to use the Escrowed Property for the sole purpose of supporting the Preferred Beneficiary's licensed software as permitted in the Cerner System Agreement and this Escrow Agreement, and for no other purposes whatsoever. Preferred Beneficiary shall be obligated to maintain the confidentiality of the released Escrowed Property.

16. TERM OF AGREEMENT. This Escrow Agreement shall remain in full force and effect until December 31, 2015 unless (a) Cerner and Preferred Beneficiary jointly instruct DSI in writing that this Escrow Agreement is terminated; or (b) this Escrow Agreement is terminated by DSI in accordance with Section 17. Thereafter, this Escrow Agreement shall automatically renew from year-to-year unless (a) Cerner unilaterally instructs DSI in writing that this Escrow Agreement is terminated; or (b) this Escrow Agreement is terminated by DSI for nonpayment in accordance with Section 17. If the Acceptance Form has been signed at a date later than this Escrow Agreement, the initial term of the Acceptance Form will be for one year with subsequent terms to be adjusted to match the anniversary date of this Escrow Agreement. If the Escrowed Property is subject to another escrow agreement with DSI, DSI reserves the right, after the initial one year term, to adjust the anniversary date of this Escrow Agreement to match the then prevailing anniversary date of such other escrow arrangements.

17. TERMINATION FOR NONPAYMENT. In the event of the nonpayment of fees owed to DSI, DSI shall provide written notice of delinquency to all parties to this Escrow Agreement. Any party to this Escrow Agreement shall have the right to make the payment to DSI to cure the default. If the past due payment is not received in full by DSI within one month of the date of such notice, then DSI shall have the right to terminate this Escrow Agreement at any time thereafter by sending written notice of termination to all parties. DSI shall have no obligation to take any action under this Escrow Agreement so long as any payment due to DSI remains unpaid.

18. DISPOSITION OF ESCROWED PROPERTY UPON TERMINATION. Upon termination of this Escrow Agreement by joint instruction of Cerner and Preferred Beneficiary (or by unilateral instruction from Cerner after the initial term), DSI shall destroy, return, or otherwise deliver the Escrowed Property in accordance with such instructions. Upon termination for

nonpayment, DSI may, at its sole discretion, destroy the Escrowed Property or return it to Cerner. DSI shall have no obligation to return or destroy the Escrowed Property if the Escrowed Property is subject to another escrow agreement with DSI.

19. SURVIVAL OF TERMS FOLLOWING TERMINATION. Upon termination of this Escrow Agreement, the following provisions of this Escrow Agreement shall survive:

a. Cerner's Representations (Section 5).

b. The obligations of confidentiality with respect to the Escrowed Property.

c. The licenses granted in the sections entitled Right to Sublicense Upon Release (Section 13) and Use Sublicense Following Release (Section 15), if a release of the Escrowed Property has occurred prior to termination.

d. The obligation to pay DSI any fees and expenses incurred and due as of the termination effective date.

e. The provisions of Sections 22 through 24.

f. The provisions of Sections 18, 19 and 26.

g. Any provisions in this Escrow Agreement which specifically state they survive the termination or expiration of this Escrow Agreement.

20. FEE SCHEDULE. DSI is entitled to be paid its standard fees and expenses applicable to the services provided. DSI shall notify the party responsible for payment of DSI's fees at least 90 days prior to any increase in fees. For any service not listed on DSI's standard fee schedule, DSI will provide a quote prior to rendering the service, if requested. All increases shall take effect on the next anniversary of the Escrow Agreement's Effective Date. Increases are limited to one per year, not to exceed the lesser of 5% per annum or the U.S. Government's Consumer Price Index for Urban Consumers per year. DSI shall never charge separately or extra for services that are part of the basic services described in the Exhibit D to the Escrow Agreement.

21. PAYMENT TERMS. DSI shall not be required to perform any service unless the payment for such service and any outstanding balances owed to DSI are paid in full. All other fees are due upon receipt of invoice. If invoiced fees are not paid, DSI may terminate this Escrow Agreement in accordance with Section 17. Late fees on past due amounts shall accrue at the rate of the lesser of one percent per month (12% per annum) or the U.S. Government's Consumer Price Index for Urban Consumers from the date of the invoice.

22. LIABILITY OF DSI. DSI shall have no obligation or liability hereunder except as a depository to retain the Escrowed Property and to dispose of same in accordance with the terms hereof. DSI shall not be required to ascertain the genuineness of any instruction or signature thereon and may act upon any notice or other document believed to be genuine. DSI shall not be liable for any action taken or omitted in connection with the performance of its duties pursuant to the provisions of this Escrow

Agreement except for its own willful and gross negligence. Provided DSI has acted in the manner stated herein, Cerner and Preferred Beneficiary each agree to indemnify, defend, and hold DSI harmless from any and all liability, damages, cost or expenses, including reasonable attorneys' fees, which may be sustained or incurred by DSI as a result of taking such action, except in the case of the willful default or gross negligence of DSI.

23. GOVERNING LAW. This Escrow Agreement shall be governed and construed under the laws of the State of Missouri.

24. NOTICE OF REQUESTED ORDER. If any party intends to obtain an order from any court of competent jurisdiction which may direct DSI to take or to refrain from taking any action, that party shall:

a. Give DSI at least two business days prior notice of the hearing, to the extent reasonably practicable;

b. Include in any request for such order that, as a precondition to DSI's obligation, DSI be paid in full for any past due fees and be paid for the reasonable value of the services to be rendered pursuant to such order; and

c. Request that DSI not be required to deliver the original (as opposed to a copy) of the Escrowed Property if DSI may need to retain the original in its possession to fulfill any of its other escrow duties.

25. ENTIRE AGREEMENT. This Escrow Agreement, which includes the Acceptance Form and the Exhibits described herein, embodies the entire understanding between all of the parties with respect to its subject matter and supersedes all previous communications, representations or understandings, either oral or written. No amendment or modification of this Escrow Agreement shall be valid or binding unless signed by all the parties hereto, except Exhibit A need not be signed by DSI and Exhibit B, Exhibit C and an Additional Escrow Account Amendment need not be signed by Preferred Beneficiary.

26. NOTICES. All notices, requests, claims, instructions and other documents and communications shall be given to the parties at the addresses specified in the attached Exhibit C and Acceptance Form. It shall be the responsibility of the parties to notify each other as provided in this Section in the event of a change of address. The parties shall have the right to rely on the last known address of the other parties. Unless otherwise provided in this Escrow Agreement, all documents and communications may be delivered by First Class mail.

27. SEVERABILITY. In the event any provision of this Escrow Agreement is found to be invalid, voidable or unenforceable, the parties agree that unless it materially affects the entire intent and purpose of this Escrow Agreement, such invalidity, voidability or unenforceability shall affect neither the validity of this Escrow Agreement nor the remaining provisions herein, and the provision in question shall be deemed to be replaced with a valid and enforceable provision most closely reflecting the intent and purpose of the original provision.

28. SUCCESSORS. This Escrow Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties. However, DSI shall have no obligation in performing this Escrow Agreement to recognize any successor or assign of Cerner or Preferred Beneficiary unless DSI receives clear, authoritative and conclusive written evidence as to the change of parties.

IN WITNESS WHEREOF, Cerner and DSI have entered into this Escrow Agreement as of the day and year first above written.

Cerner Corporation

By: Clifford W. Illig

Name: Clifford W. Illig

Title: President

Date: 7/31/97

Data Securities International, Inc.

By: Christie Woodward

Name: Christie Woodward

Title: Contract Administrator

Date: 8/15/97

EXHIBIT A

MATERIALS TO BE DEPOSITED

Account Number _____

Cerner represents to Preferred Beneficiary that Escrowed Materials delivered to DSI shall consist of the following:

SEE APPENDIX 1 TO EXHIBIT A

Cerner Corporation	Preferred Beneficiary
By: Clifford W. Illig	By: _____
Name: Clifford W. Illig	Name: _____
Title: President	Title: _____
Date: 7/31/97	Date: _____

Appendix 1 to Exhibit A

Cerner Corporation

ESCROW DEPOSIT OVERVIEW

The escrow deposit consists of source code, reference files, and manufacturing tools for the following:

HNA FAMILY	PRODUCT LINE	PRODUCT/MODULE	306
System Mgmt	Database Admin	Database Administration (SA)	x
	Auto Sys Processing	System Operations (OP)	x
		Purge (BP)	x
		Optical Disk for Purge	x
		Microfiche	x
		Charge Capture/Reporting (CCJ)	x
	Troubleshooting	System Support (SS)	x
Core Systems	Carenet	Order Management (OM)	x
		Patient Management (PM)	x
		Patient Scheduling (SC)	x
Clinical Systems	Principle Functions	Clinical Patient Registration(PA)	x
		Clinical Order Entry/Inquiry(OE)	x
		Clinical Result Entry	x
		Clinical Charting (CP)	x
		Workload Reporting (LR)	x
		CAP Workload Reporting DB	x
		CAP SNOMED Database	x
	MedNet	Common MedNet Functions(PM)	x
		Pulmonary Function Lab (PL)	x
		Respiratory Care (RC)	x
	PathNet	Anatomic Pathology (AP)	x
		Blood Bank Donor (DM)	x
		Blood Bank Transfusion (BB)	x
		Pathology Image Capture/Review	x
		Commercial Req Processing (RL)	x
		Container Tracking (CT)	x
		General Laboratory (LB)	x
		Gen Lab Medical Abstract (MA)	x
		Microbiology (MB)	x
		Microbiology Medical Abstract	x
		Outreach Services	x
		PortaPro Bedside Collection (BC)	x
		PortaPro Donor Registration(DR)	x
		Specimen Tracking (ST)	x
		Specimen Collection (CS)	x

HNA FAMILY	PRODUCT LINE	PRODUCT/MODULE	306
Clinical Systems	PharmNet	Inpatient Pharmacy (PH)	x
(Continued)		Outpatient/Retail Pharmacy	x
		Medication Admin Record (MD)	x
		Barcode Charge/Credit (CC)	x
	RadNet	Diagnostic Radiology (RN)	x
		Remote Report Distribution(XM)	x
		Patient Tracking (PT)	x
		WPLink for AP (WP)	x
Decision Support	Knowledge Systems	Discern (RS)	x
		Reflexive Testing (RT)	x
	Normative Data Mgmt	Infection Control (IC)	x
		IC Candidate Reporting (IC)	x
	Discern Expert	CCL	x
Admin Systems	Client Accounting	Accounts Receivable (AR)	x
		Advanced Pricing (PR)	x
		Invoicing (BL)	x
		Collections (CL)	x
	Inventory	Inventory Management (MM)	x
Strategic Systems	Marketing Mgmt	Marketing Analysis (MK)	x
	Product Line Mgmt	Cost Accounting (CA)	x
	Quality Management	Service Level Management (SL)	x
		Utilization Management (UR)	x
	Tools/Productivity	Electronic Mail (ML)	x
		Bulletin Board (ML)	x
		Electronic Message Taking (ML)	x
		Cerner Spreadsheet (PS)	x
		Cerner Text Editor (PS)	x

Appendix 2 to Exhibit A

Cerner Corporation

ESCROW DEPOSIT OVERVIEW

The escrow deposit for HNA Millenium 500.006.000 consists of source code, reference files, and manufacturing tools for the following:

Product Area
CASE MANAGEMENT
CHARGE SERVICES
CHARTING
CLINICAL IMAGING
COST MANAGEMENT
DESIGNERS WORKBENCH
DISCERN
DOCUMENT MANAGEMENT
FSI
HLA
INSTALLATION
INTERNATIONAL DEVELOPMENT
MATERIALS MANAGEMENT
MDI
MEDNET
OCF
OMF
OPEN AGREEMENT FOUNDATION
OPEN ENGINE
ORDER MANAGEMENT
PathLink
PATHNET -- ANATOMIC PATHOLOGY
PATHNET -- BB DONOR
PATHNET -- BB TRANSFUSION
PATHNET -- COLLECTIONS
PATHNET -- GEN LAB
PATHNET -- MICROBIOLOGY
PATHNET -- OUTREACH SERVICES
PERSON MANAGEMENT
PHARMNET
POWERCHART
PROCALL
ProFile

PROFIT
PROVIDE
RADNET
RRD
SCHEDULING
SERVERS & SERVICES
SURGINET
SYSTEM MANAGEMENT
TECHNOLOGIES

EXHIBIT B

DESCRIPTION OF ESCROWED PROPERTY

Cerner Company Name Cerner Corporation
Account Number 0305017-00001

PRODUCT DESCRIPTION:

Product Name Classic HNA 306 Version Revision 69 (April 97)
Operating System VAX VMS 5.5-7.2; Open VMS (Alpha) 6.1-7.2

Hardware Platform Digital Equipment Corporation (DEC)

COPYING INFORMATION:

Hardware required: TF85, TZ87, TZ877 or compatible.

Software required: DEC Open VMS or VAX VMS 5.5 or higher tape backup command procedures.

DESCRIPTION OF ESCROWED PROPERTY:

Qty	Media Type & Size	Label Description of Each Separate Item (excluding documentation)
____	Disk 3.5" or ____	
____	DAT tape ____mm	
____	CD-ROM	
____	Data cartridge tape ____	
1	TK 70 or ____ tape	R300A, 4-25-97, HNA Escrow SW, Rel 306HNA, 500136
____	Magnetic tape ____	
____	Documentation	
____	Other ____	

I certify for Cerner that the above described Escrowed Property have been transmitted to DSI:

Signature Clifford W. Illig
Print Name Clifford W. Illig
Date 7/31/97

DSI has inspected and accepted the above materials (any exceptions are noted above):

Signature Christie Woodward
Print Name Christie Woodward
Date Accepted 8.19.97
Exhibit B# 1

Send materials to: DSI, 9555 Chesapeake Dr. #200, San Diego, CA 92123

DSI CONFIDENTIAL

EXHIBIT B

DESCRIPTION OF DEPOSIT MATERIALS

Depositor Company Name Cerner Corporation

Account Number 0305017-00001

Product Name HNA Millennium Version 500.006.000
(Product Name will appear on Account History report)

DEPOSIT MATERIAL DESCRIPTION:

Quantity	Media Type & Size	Label Description of Each Separate Item *(Please use other side if additional space is needed)*
	Disk 3.5" or ____	
	DAT tape ____mm	
11	CD-ROM [see attached]	
	Data cartridge tape ____	
	TK 70 or ____ tape	
	Magnetic tape ____	
	Documentation	
2	Other 8mm tapes [see attached]	

PRODUCT DESCRIPTION:

Operating System Open VMS 7.1 or AIXRS6000 4.1.4 and Win95/WinNT 4.0

Hardware Platform Digital Equipment Corporation (DEC) or IBM Microsoft

DEPOSIT COPYING INFORMATION:

Hardware required: CD-ROM drive and 8mm if ALX

Software required: Open VMS 7.1 or AIXRS6000 4.1.4 and Microsoft Win95/WinNT 4.0

I certify for **Depositor** that the above described deposit materials have been transmitted to DSI:

Signature Clifford W. Illig
Print Name Clifford W. Illig
Date February 27, 1998

DSI has inspected and accepted the above materials *(any exceptions are noted above)*:

Signature Christie Woodward
Print Name Christie Woodward
Date Accepted 3-6-98
Exhibit B# 2

Send materials to: DSI, 9555 Chesapeake Dr. #200, San Diego, CA 92123 (619) 694-1900

© 1983, 1997 DSI

EB97v1

DSI
CONFIDENTIAL

CD-ROM:

- 1 HNA 500.006 Client NT/Win95 Vol 1 of 2 CD
- 1 HNA 500.006 Client NT/Win95 Vol 2 of 2 CD
- 1 HNA 500.006 Server AXP CD
- 1 HNA 500.006 Basic Data Set
- Oracle 7.3.2.3 AXP Vol 1 of 1
- 1 Oracle Enterprise Manager & Documentation CD
- 1 HNA 500.006 Client Source Code Vol 1 of 3 CD
- 1 HNA 500.006 Client Source Code Vol 2 of 3 CD
- 1 HNA 500.006 Client Source Code Vol 3 of 3 CD
- 1 HNA 500.006 Server Source Code CD
- 1 HNA Internal Tools and Escrow Documentation CD

8MM Tape:

- 1 AIX Server 500.006 tape
- 1 AIX Server 500.006 Source Code tape

EXHIBIT C

DESIGNATED CONTACT

Master Number _____

Notices and communications should be addressed to:

Company Name: Cerner Corporation
Address: 2800 Rockcreek Parkway
Kansas City, MO 64117

Designated Contact: Chief Legal Officer
Telephone: 816-201-1024
Facsimile: 816-474-1742

Invoices should be addressed to:

Cerner Corporation
2800 Rockcreek Parkway
Kansas City, MO 64117

Contact: Legal Administrator
816-201-2030
816-474-1742

Requests to change the designated contact should be given in writing by the designated contact or an authorized employee.

Contracts, Escrowed Property and notices to DSI should be addressed to:

DSI
Contract Administration
Suite 200
9555 Chesapeake Drive
San Diego, CA 92123

Telephone: (619) 694-1900
Facsimile: (619) 694-1919

Date: _____

Invoice inquiries and fee remittances to DSI should be addressed to:

DSI
Accounts Receivable
Suite 1450
425 California Street
San Francisco, CA 94104

(415) 398-7900
(415) 398-7914

Robin Freidrich (770/239-9200) x 123
DSI Contact Person

ACCEPTANCE FORM

Account Number _____

_____, hereby (i) acknowledges that it is the Preferred Beneficiary referred to in the MASTER PREFERRED HIGH TECHNOLOGY ESCROW AGREEMENT effective September, 1 1996 with Data Securities International, Inc. ("DSI") and CERNER CORPORATION ("Cerner") and (ii) agrees to be bound by all provisions of such Agreement.

_____
By: _____
Name: _____
Title: _____
Date: _____

Notices and communications should be addressed to:

Company Name: _____
Address: _____
_____
_____
Designated Contact: _____
Telephone: _____
Facsimile: _____

Invoices should be addressed to:

_____
_____
_____
_____
Contact: _____
_____
_____

CERNER hereby enrolls Preferred Beneficiary to the following account(s):

Account Name	Account Number

Cerner Corporation

By: _____
Name: _____
Title: _____
Date: _____

Data Securities International, Inc.

By: _____
Name: _____
Title: _____
Date: _____

Exhibit R (Confidentiality and Assignment Agreement)

to the

Electronic Health Records System and Services Agreement

EXHIBIT R

CONFIDENTIALITY AND ASSIGNMENT AGREEMENT

CONTRACTOR: _____

1. GENERAL INFORMATION

The organization identified above ("**Contractor**") is under contract ("**Agreement**") to provide Services (as such term is defined in the Agreement) to the County of Los Angeles ("**County**"). County requires each employee, agent, consultant, outsourced vendor and independent contractor (in this Exhibit R "staff") of this Contractor performing Services under such Agreement to understand his/her obligations with respect to the personal, proprietary and other confidential material, data or information, with which he/she will be in contact. Contractor, by executing this Confidentiality and Assignment Agreement ("**Confidentiality and Assignment Agreement**"), represents that it shall ensure each such staff member's compliance with the obligations regarding such data and information, as set forth in the Agreement, including this Exhibit R.

2. CONTRACTOR ACKNOWLEDGMENT

Contractor understands and agrees that all of Contractor's, or any subcontractor's, staff that will provide Services pursuant to the above-referenced Agreement are Contractor's, or any subcontractor's, sole responsibility. Contractor understands and agrees that its, or any subcontractor's, staff must rely exclusively upon Contractor, or any subcontractor, for payment of salary and any and all other benefits payable by virtue of such staff's performance of Services under the above-referenced Agreement.

Contractor understands and agrees that its, or any subcontractor's, employees are not employees of County for any purpose whatsoever and that such staff do not have and will not acquire any rights or benefits of any kind from County by virtue of performance of Services under the above-referenced Agreement. Contractor understands and agrees that its, or any subcontractor's, staff do not have and will not acquire any rights or benefits from County pursuant to any agreement between any person or entity and County.

3. CONFIDENTIALITY

Contractor, any subcontractor, and their staff, by virtue of performing Services under the above-referenced Agreement, may come in contact with (i) Confidential Information (as such term is defined in the Agreement), (ii) data and information, which County has an obligation to keep confidential by applicable law or otherwise, and (iii) proprietary information belonging to other organizations, contractors or their subcontractors doing business with County (collectively for the purpose of this Exhibit R "**Confidential Information**"). By signing this Confidentiality and Assignment Agreement, Contractor agrees that, by virtue of involvement in the Services under the Agreement, it, any subcontractor, and their staff shall protect the confidentiality of all such Confidential Information pursuant to the terms of Section 19 (Confidentiality) of the Agreement and as specified below.

Contractor agrees, on behalf of itself, its subcontractors and all staff, (i) to protect from loss and hold in confidence any and all Confidential Information; (ii) not to directly or indirectly reveal, report, publish, transfer, reproduce to, or for the benefit of, any unauthorized person or otherwise disclose any Confidential Information obtained while performing Services under the above-referenced Agreement; and (iii) to utilize the Confidential Information solely for the limited purpose of providing Services pursuant to the Agreement. Contractor's, or any subcontractor's, staff shall forward all requests for disclosure or copying of any such information in their possession or care to the County Project Manager under the Agreement.

Contractor agrees to report to the County Project Manager under the Agreement any and all violations of this Confidentiality and Assignment Agreement, including unauthorized disclosures or copying of Confidential Information, whether accidental or intentional, and whether by Contractor's, or any subcontractor's, staff and/or by any other person, of which such staff become aware. Contractor agrees and shall ensure that its, or any subcontractor's, staff return possession of all Confidential Information to the County Project Manager under the Agreement upon completion of the above-referenced Agreement, or termination of employment with the Contractor, or any subcontractor, whichever occurs first.

SIGNED _____ DATE 03/01/2012

PRINTED Marc Naughton TITLE EVP & Chief Financial Officer

Exhibit S (Contractor's EEO Certification)

to the

Electronic Health Records System and Services Agreement

EXHIBIT S

CONTRACTOR'S EEO CERTIFICATION

Cerner Corporation
Contractor's Name
2800 Rockcreek Parkway Kansas City, MO 64117
Address
43-1196944
Internal Revenue Service Employer Identification Number

GENERAL

In accordance with Subchapter VII of the *Civil Rights Act of 1964, 42 USC Sections 2000e* through *2000e-17,* and the *Americans with Disabilities Act of 1990*, Contractor, supplier, or vendor certifies and agrees that all persons employed by such firm, its affiliates, subsidiaries, or holding companies are and will be treated equally by the firm without regard to or because of race, color, religion, ancestry, national origin, age, condition of physical or mental disability, marital status, political affiliation or sex and in compliance with all anti-discrimination laws of the United States of America and the State of California.

CONTRACTOR'S CERTIFICATION
(check one)

		YES	NO
1.	The Contractor has a written policy statement prohibiting discrimination in all phases of employment.	x	
2.	The Contractor periodically conducts a self-analysis or utilization analysis of its work force.	x	
3.	The Contractor has a system for determining if its employment practices are discriminatory against protected groups.	x	
4.	Where problem areas are identified in employment practices, the Contractor has a system for taking reasonable corrective action to include establishment of goals or timetables.	x	

Cerner Corporation

Company Name

Sara Lovins

Signature

1/13/11

Date

Exhibit T (County Ordinances and Policies)

to the

Electronic Health Records System and Services Agreement

EXHIBIT T

COUNTY ORDINANCES AND POLICIES

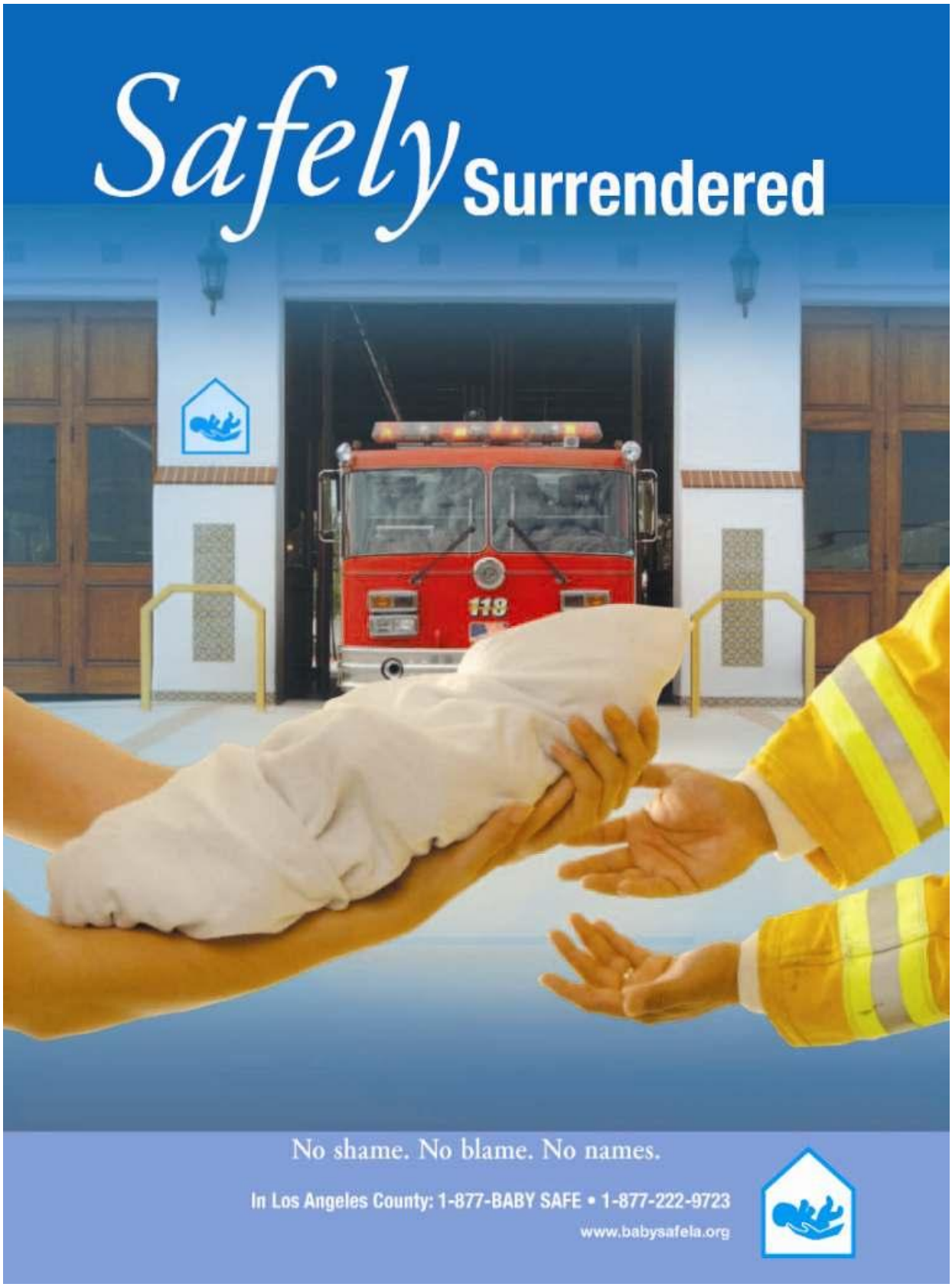
The following Exhibits are attached to this Exhibit T (County Ordinances and Policies) and are hereby incorporated by reference:

Exhibit T.1	Safely Surrendered Baby Law
Exhibit T.2	Jury Service Ordinance
Exhibit T.3	IRS Notice 1015

Exhibit T.1 (Safely Surrendered Baby Law)

to the

Electronic Health Records System and Services Agreement


Safely Surrendered
No shame. No blame. No names.
In Los Angeles County: 1-877-BABY SAFE • 1-877-222-9723
www.babysafela.org

In Los Angeles County: 1 877 BABY SAFE 1 877 222 9723
www.babysafela.org

Safely Surrendered *Baby Law*

What is the Safely Surrendered Baby Law?

California's Safely Surrendered Baby Law allows parents or other persons, with lawful custody, which means anyone to whom the parent has given permission to confidentially surrender a baby. As long as the baby is three days (72 hours) of age or younger and has not been abused or neglected, the baby may be surrendered without fear of arrest or prosecution.

How does it work?

A distressed parent who is unable or unwilling to care for a baby can legally, confidentially, and safely surrender a baby within three days (72 hours) of birth. The baby must be handed to an employee at a hospital or fire station in Los Angeles County. As long as the baby shows no sign of abuse or neglect, no name or other information is required. In case the parent changes his or her mind at a later date and wants the baby back, staff will use bracelets to help connect them to each other. One bracelet will be placed on the baby, and a matching bracelet will be given to the parent or other surrendering adult.

What if a parent wants the baby back?

Parents who change their minds can begin the process of reclaiming their baby within 14 days. These parents should call the Los Angeles County Department of Children and Family Services at **1-800-540-4000.**

Can only a parent bring in the baby?

No. While in most cases a parent will bring in the baby, the Law allows other people to bring in the baby if they have lawful custody.

Does the parent or surrendering adult have to call before bringing in the baby?

No. A parent or surrendering adult can bring in a baby anytime, 24 hours a day, 7 days a week, as long as the parent or surrendering adult surrenders the baby to someone who works at the hospital or fire station.

Does the parent or surrendering adult have to tell anything to the people taking the baby?

No. However, hospital or fire station personnel will ask the surrendering party to fill out a questionnaire designed to gather important medical history information, which is very useful in caring for the baby. The questionnaire includes a stamped return envelope and can be sent in at a later time.

What happens to the baby?

The baby will be examined and given medical treatment. Upon release from the hospital, social workers immediately place the baby in a safe and loving home and begin the adoption process.

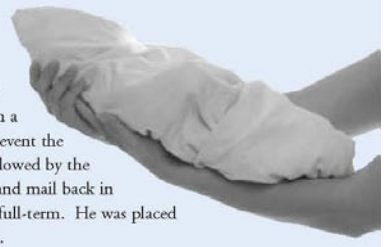
What happens to the parent or surrendering adult?

Once the parent or surrendering adult surrenders the baby to hospital or fire station personnel, they may leave at any time.

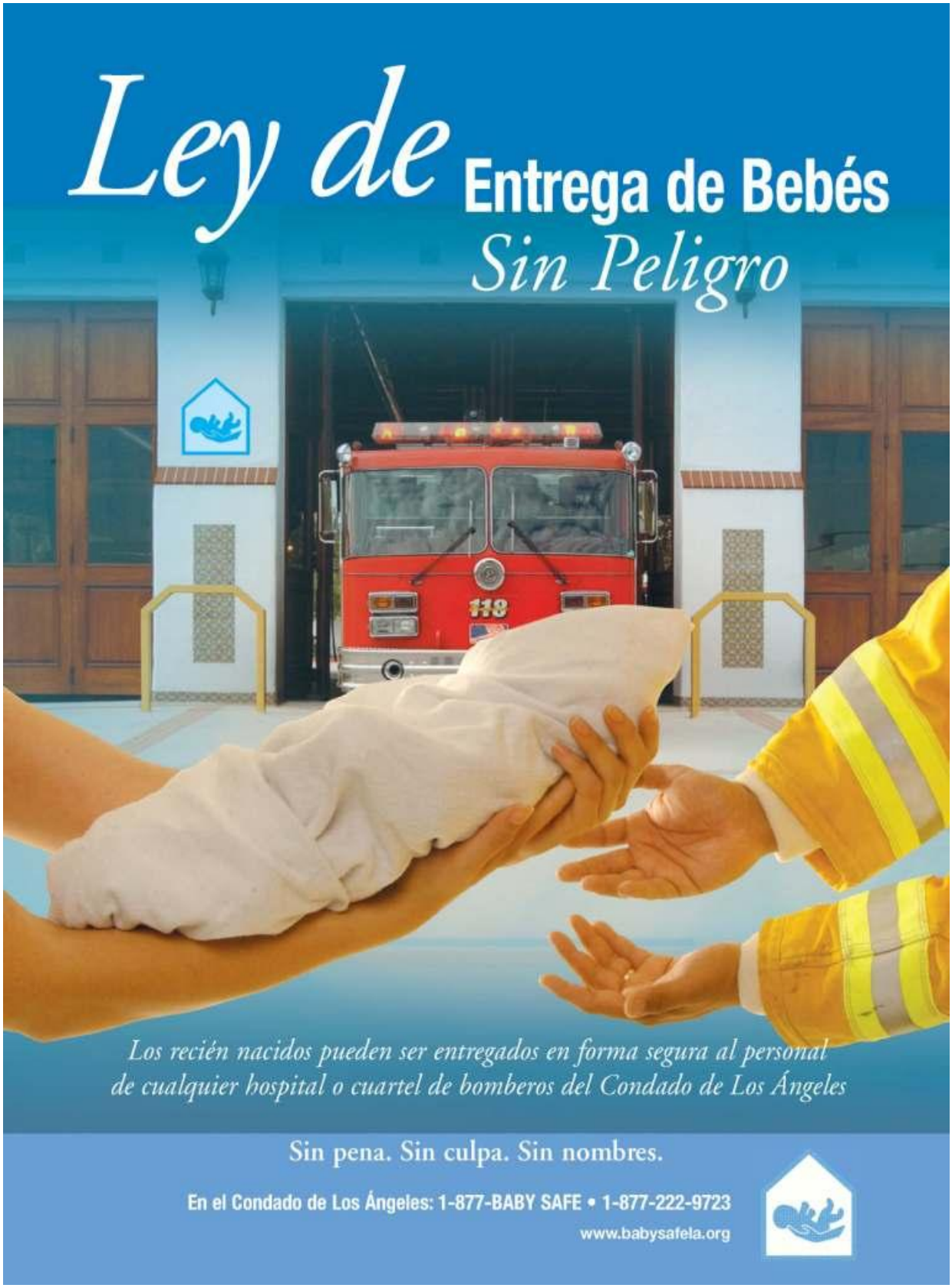
Why is California doing this?

The purpose of the **Safely Surrendered Baby Law** is to protect babies from being abandoned, hurt or killed by their parents. You may have heard tragic stories of babies left in dumpsters or public bathrooms. Their parents may have been under severe emotional distress. The mothers may have hidden their pregnancies, fearful of what would happen if their families found out. Because they were afraid and had no one or nowhere to turn for help, they abandoned their babies. Abandoning a baby is illegal and places the baby in extreme danger. Too often, it results in the baby's death. The **Safely Surrendered Baby Law** prevents this tragedy from ever happening again in California.

A baby's story



Early in the morning on April 9, 2005, a healthy baby boy was safely surrendered to nurses at Harbor-UCLA Medical Center. The woman who brought the baby to the hospital identified herself as the baby's aunt and stated the baby's mother had asked her to bring the baby to the hospital on her behalf. The aunt was given a bracelet with a number matching the anklet placed on the baby; this would provide some identification in the event the mother changed her mind about surrendering the baby and wished to reclaim the baby in the 14-day period allowed by the Law. The aunt was also provided with a medical questionnaire and said she would have the mother complete and mail back in the stamped return envelope provided. The baby was examined by medical staff and pronounced healthy and full-term. He was placed with a loving family that had been approved to adopt him by the Department of Children and Family Services.


Ley de Entrega de Bebés
Sin Peligro
Los recién nacidos pueden ser entregados en forma segura al personal
de cualquier hospital o cuartel de bomberos del Condado de Los Ángeles
Sin pena. Sin culpa. Sin nombres.
En el Condado de Los Ángeles: 1-877-BABY SAFE • 1-877-222-9723
www.babysafela.org

En el Condado de Los Ángeles: 1-877-BABY SAFE • 1-877-222-9723

www.babysafela.org

Ley de Entrega de Bebés *Sin Peligro*

¿Qué es la Ley de Entrega de Bebés sin Peligro?

La Ley de Entrega de Bebés sin Peligro de California permite la entrega confidencial de un recién nacido por parte de sus padres u otras personas con custodia legal, es decir cualquier persona a quien los padres le hayan dado permiso. Siempre que el bebé tenga tres días (72 horas) de vida o menos, y no haya sufrido abuso ni negligencia, pueden entregar al recién nacido sin temor de ser arrestados o procesados.

Cada recién nacido se merece la oportunidad de tener una vida saludable. Si alguien que usted conoce está pensando en abandonar a un recién nacido, infórmele que tiene otras opciones. Hasta tres días (72 horas) después del nacimiento, se puede entregar un recién nacido al personal de cualquier hospital o cuartel de bomberos del condado de Los Angeles.

¿Cómo funciona?

El padre/madre con dificultades que no pueda o no quiera cuidar de su recién nacido puede entregarlo en forma legal, confidencial y segura dentro de los tres días (72 horas) del nacimiento. El bebé debe ser entregado a un empleado de cualquier hospital o cuartel de bomberos del Condado de Los Ángeles. Siempre que el bebé no presente signos de abuso o negligencia, no será necesario suministrar nombres ni información alguna. Si el padre/madre cambia de opinión posteriormente y desea recuperar a su bebé, los trabajadores utilizarán brazaletes para poder vincularlos. El bebé llevará un brazalete y el padre/madre o el adulto que lo entregue recibirá un brazalete igual.

¿Qué pasa si el padre/madre desea recuperar a su bebé?

Los padres que cambien de opinión pueden comenzar el proceso de reclamar a su recién nacido dentro de los 14 días. Estos padres deberán llamar al Departamento de Servicios para Niños y Familias (Department of Children and Family Services) del Condado de Los Ángeles al **1-800-540-4000**.

¿Sólo los padres podrán llevar al recién nacido?

No. Si bien en la mayoría de los casos son los padres los que llevan al bebé, la ley permite que otras personas lo hagan *si tienen custodia legal.*

¿Los padres o el adulto que entrega al bebé deben llamar antes de llevar al bebé?

No. El padre/madre o adulto puede llevar al bebé en cualquier momento, las 24 horas del día, los 7 días de la semana, siempre y cuando entreguen a su bebé a un empleado del hospital o cuartel de bomberos.

¿Es necesario que el padre/madre o adulto diga algo a las personas que reciben al bebé?

No. Sin embargo, el personal del hospital o cuartel de bomberos le pedirá a la persona que entregue al bebé que llene un cuestionario con la finalidad de recabar antecedentes médicos importantes, que resultan de gran utilidad para cuidar bien del bebé. El cuestionario incluye un sobre con el sello postal pagado para enviarlo en otro momento.

¿Qué pasará con el bebé?

El bebé será examinado y le brindarán atención médica. Cuando le den el alta del hospital, los trabajadores sociales inmediatamente ubicarán al bebé en un hogar seguro donde estará bien atendido, y se comenzará el proceso de adopción.

¿Qué pasará con el padre/madre o adulto que entregue al bebé?

Una vez que los padres o adulto hayan entregado al bebé al personal del hospital o cuartel de bomberos, pueden irse en cualquier momento.

¿Por qué se está haciendo esto en California? ?

La finalidad de la **Ley de Entrega de Bebés sin Peligro** es proteger a los bebés para que no sean abandonados, lastimados o muertos por sus padres. Usted probablemente haya escuchado historias trágicas sobre bebés abandonados en basureros o en baños públicos. Los padres de esos bebés probablemente hayan estado pasando por dificultades emocionales graves. Las madres pueden haber ocultado su embarazo, por temor a lo que pasaría si sus familias se enteraran. Abandonaron a sus bebés porque tenían miedo y no tenían nadie a quien pedir ayuda. El abandono de un recién nacido es ilegal y pone al bebé en una situación de peligro extremo. Muy a menudo el abandono provoca la muerte del bebé. La **Ley de Entrega de Bebés sin Peligro** impide que vuelva a suceder esta tragedia en California.

Historia de un bebé

A la mañana temprano del día 9 de abril de 2005, se entregó un recién nacido saludable a las enfermeras del Harbor-UCLA Medical Center. La mujer que llevó el recién nacido al hospital se dio a conocer como la tía del bebé, y dijo que la madre le había pedido que llevara al bebé al hospital en su nombre. Le entregaron a la tía un brazalete con un número que coincidía con la pulsera del bebé; esto serviría como identificación en caso de que la madre cambiara de opinión con respecto a la entrega del bebé y decidiera recuperarlo dentro del período de 14 días que permite esta ley. También le dieron a la tía un cuestionario médico, y ella dijo que la madre lo llenaría y lo enviaría de vuelta dentro del sobre con franqueo pagado que le habían dado. El personal médico examinó al bebé y se determinó que estaba saludable y a término. El bebé fue ubicado con una buena familia que ya había sido aprobada para adoptarlo por el Departamento de Servicios para Niños y Familias.

Exhibit T.2 (Jury Service Ordinance)

to the

Electronic Health Records System and Services Agreement

2.203.010 Findings.

The board of supervisors makes the following findings. The county of Los Angeles allows its permanent, full-time employees unlimited jury service at their regular pay. Unfortunately, many businesses do not offer or are reducing or even eliminating compensation to employees who serve on juries. This creates a potential financial hardship for employees who do not receive their pay when called to jury service, and those employees often seek to be excused from having to serve. Although changes in the court rules make it more difficult to excuse a potential juror on grounds of financial hardship, potential jurors continue to be excused on this basis, especially from longer trials. This reduces the number of potential jurors and increases the burden on those employers, such as the county of Los Angeles, who pay their permanent, full-time employees while on juror duty. For these reasons, the county of Los Angeles has determined that it is appropriate to require that the businesses with which the county contracts possess reasonable jury service policies. (Ord. 2002-0015 § 1 (part), 2002)

2.203.020 Definitions.

The following definitions shall be applicable to this chapter:

A. "Contractor" means a person, partnership, corporation or other entity which has a contract with the county or a subcontract with a county contractor and has received or will receive an aggregate sum of $50,000 or more in any 12-month period under one or more such contracts or subcontracts.

B. "Employee" means any California resident who is a full-time employee of a contractor under the laws of California.

C. "Contract" means any agreement to provide goods to, or perform services for or on behalf of, the county but does not include:

1. A contract where the board finds that special circumstances exist that justify a waiver of the requirements of this chapter; or

2. A contract where federal or state law or a condition of a federal or state program mandates the use of a particular contractor; or

3. A purchase made through a state or federal contract; or

4. A monopoly purchase that is exclusive and proprietary to a specific manufacturer, distributor, or reseller, and must match and inter-member with existing supplies, equipment or systems maintained by the county pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section P-3700 or a successor provision; or

5. A revolving fund (petty cash) purchase pursuant to the Los Angeles County Fiscal Manual, Section 4.4.0 or a successor provision; or

6. A purchase card purchase pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section P-2810 or a successor provision; or

7. A non-agreement purchase with a value of less than $5,000 pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section A-0300 or a successor provision; or

8. A bona fide emergency purchase pursuant to the Los Angeles County Purchasing Policy and Procedures Manual, Section PP-1100 or a successor provision.

D. "Full time" means 40 hours or more worked per week, or a lesser number of hours if:

1. The lesser number is a recognized industry standard as determined by the chief administrative officer, or

2. The contractor has a long-standing practice that defines the lesser number of hours as full time.

E. "County" means the county of Los Angeles or any public entities for which the board of supervisors is the governing body. (Ord. 2002-0040 § 1, 2002: Ord. 2002-0015 § 1 (part), 2002)

2.203.030 Applicability.

This chapter shall apply to contractors who enter into contracts that commence after July 11, 2002. This chapter shall also apply to contractors with existing contracts which are extended into option years that commence after July 11, 2002. Contracts that commence after May 28, 2002, but before July 11, 2002, shall be subject to the provisions of this chapter only if the solicitations for such contracts stated that the chapter would be applicable. (Ord. 2002-0040 § 2, 2002: Ord. 2002-0015 § 1 (part), 2002)

2.203.040 Contractor Jury Service Policy.

A contractor shall have and adhere to a written policy that provides that its employees shall receive from the contractor, on an annual basis, no less than five days of regular pay for actual jury service. The policy may provide that employees deposit any fees received for such jury service with the contractor or that the contractor deduct from the employees' regular pay the fees received for jury service. (Ord. 2002-0015 § 1 (part), 2002)

2.203.050 Other Provisions.

A. Administration. The chief administrative officer shall be responsible for the administration of this chapter. The chief administrative officer may, with the advice of county counsel, issue interpretations of the provisions of this chapter and shall issue written instructions on the

implementation and ongoing administration of this chapter. Such instructions may provide for the delegation of functions to other county departments.

B. Compliance Certification. At the time of seeking a contract, a contractor shall certify to the county that it has and adheres to a policy consistent with this chapter or will have and adhere to such a policy prior to award of the contract. (Ord. 2002-0015 § 1 (part), 2002)

2.203.060 Enforcement and Remedies.

For a contractor's violation of any provision of this chapter, the county department head responsible for administering the contract may do one or more of the following:

1. Recommend to the board of supervisors the termination of the contract; and/or,

2. Pursuant to chapter 2.202, seek the debarment of the contractor. (Ord. 2002-0015 § 1 (part), 2002)

2.203.070. Exceptions.

A. Other Laws. This chapter shall not be interpreted or applied to any contractor or to any employee in a manner inconsistent with the laws of the United States or California.

B. Collective Bargaining Agreements. This chapter shall be superseded by a collective bargaining agreement that expressly so provides.

C. Small Business. This chapter shall not be applied to any contractor that meets all of the following:

1. Has ten or fewer employees during the contract period; and,

2. Has annual gross revenues in the preceding twelve months which, if added to the annual amount of the contract awarded, are less than $500,000; and,

3. Is not an affiliate or subsidiary of a business dominant in its field of operation.

"Dominant in its field of operation" means having more than ten employees and annual gross revenues in the preceding twelve months which, if added to the annual amount of the contract awarded, exceed $500,000.

"Affiliate or subsidiary of a business dominant in its field of operation" means a business which is at least 20 percent owned by a business dominant in its field of operation, or by partners, officers, directors, majority stockholders, or their equivalent, of a business dominant in that field of operation. (Ord. 2002-0015 § 1 (part), 2002)

2.203.090. Severability.

If any provision of this chapter is found invalid by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect. (Ord. 2002-0015 § 1 (part), 2002)

Exhibit T.3 (IRS Notice 1015)

to the

Electronic Health Records System and Services Agreement

Department of the Treasury
Internal Revenue Service

Notice 1015

(Rev. December 2010)

Have You Told Your Employees About the Earned Income Credit (EIC)?

What Is the EIC?

The EIC is a refundable tax credit for certain workers.

Which Employees Must I Notify About the EIC?

You must notify each employee who worked for you at any time during the year and from whom you did not withhold income tax. However, you do not have to notify any employee who claimed exemption from withholding on Form W-4, Employee's Withholding Allowance Certificate.

Note. You are encouraged to notify each employee whose wages for 2010 are less than $48,362 that he or she may be eligible for the EIC.

How and When Must I Notify My Employees?

You must give the employee one of the following:

- The IRS Form W-2, Wage and Tax Statement, which has the required information about the EIC on the back of Copy B.
- A substitute Form W-2 with the same EIC information on the back of the employee's copy that is on Copy B of the IRS Form W-2.
- Notice 797, Possible Federal Tax Refund Due to the Earned Income Credit (EIC).
- Your written statement with the same wording as Notice 797.

If you are required to give Form W-2 and do so on time, no further notice is necessary if the Form W-2 has the required information about the EIC on the back of the employee's copy. If a substitute Form W-2 is given on time but does not have the required information, you must notify the employee within 1 week of the date the substitute Form W-2 is given. If Form W-2 is required but is not given on time, you must give the employee Notice 797 or your written statement by the date Form W-2 is required to be given. If Form W-2 is not required, you must notify the employee by February 7, 2011.

You must hand the notice directly to the employee or send it by first-class mail to the employee's last known address. You will not meet the notification requirements by posting Notice 797 on an employee bulletin board or sending it through office mail. However, you may want to post the notice to help inform all employees of the EIC. You can get copies of the notice from IRS.gov or by calling 1-800-829-3676.

How Will My Employees Know If They Can Claim the EIC?

The basic requirements are covered in Notice 797. For more detailed information, the employee needs to see Pub. 596, Earned Income Credit (EIC), or the instructions for Form 1040, 1040A, or 1040EZ.

How Do My Employees Claim the EIC?

Eligible employees claim the EIC on their 2010 tax return. Even employees who have no tax withheld from their pay or owe no tax can claim the EIC and get a refund, but they must file a tax return to do so. For example, if an employee has no tax withheld in 2010 and owes no tax but is eligible for a credit of $829, he or she must file a 2010 tax return to get the $829 refund.

Can My Employees Get Advance EIC Payments?

After 2010, your employees can no longer get advance payments of the credit in their pay during the year as they could in 2010 and earlier years, because the law changed. However, if they are eligible, they will still be able to claim the credit on their 2011 return.

Form W-5, Earned Income Credit Advance Payment Certificate, is no longer in use.

Notice **1015** (Rev. 12-2010)
Cat. No. 20599I

Printed on recycled paper

Exhibit U (Clusters)

to the

Electronic Health Records System and Services Agreement

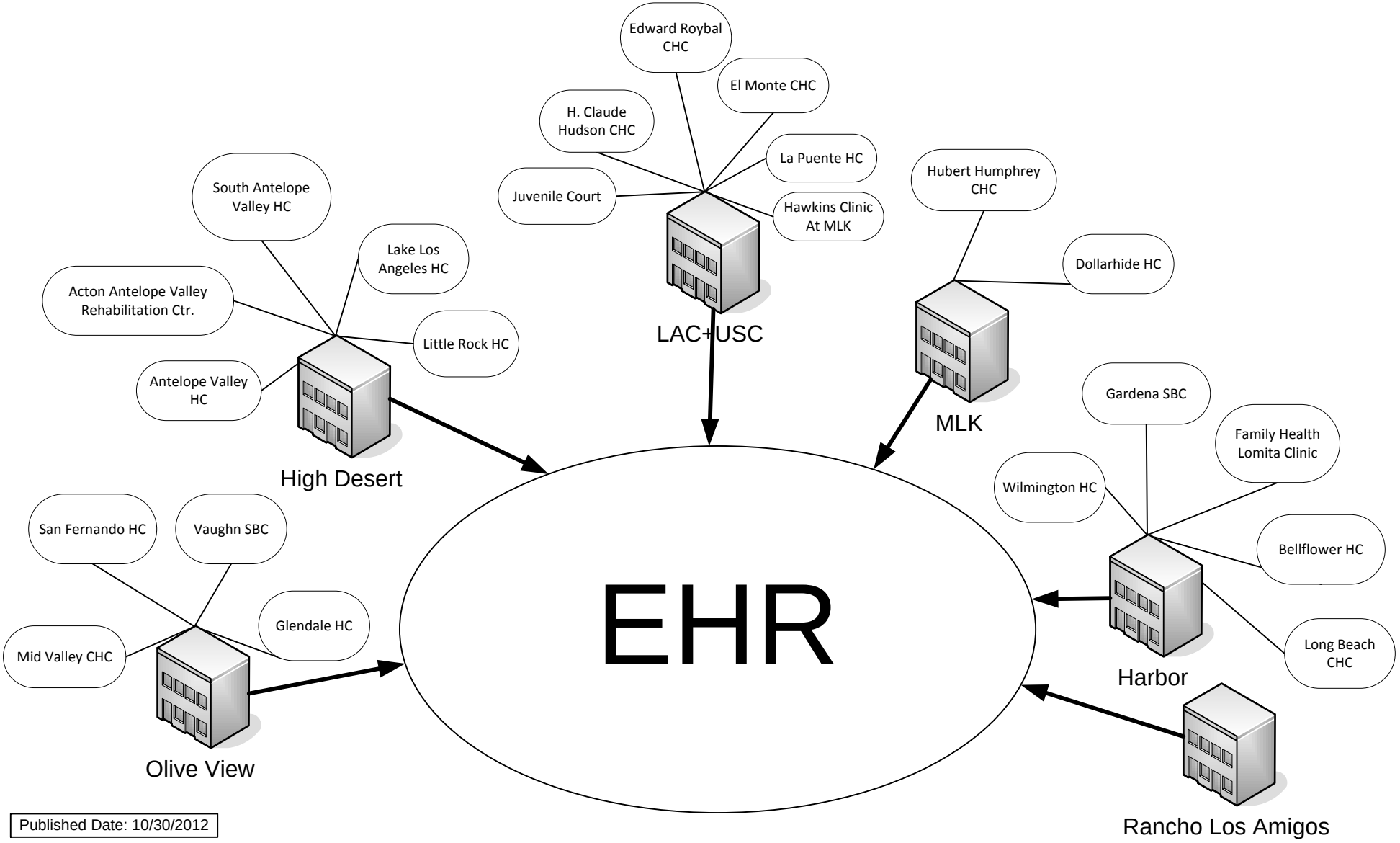
Exhibit U

CLUSTERS

DHS FACILITIES					
Clinic Name	**Address**	**City**	**Zip**	**Phone**	**Org Type**
AV High Desert Health System	335 E. Ave K-6, Ste B	Lancaster	93535	661-945-8205	Comprehensive Health Center
AV High Desert Health System	335 E. Ave K-6, Ste B	Lancaster	93535	661-524-2005	Comprehensive Health Center
Bellflower H.C.	10005 E. Flower Ave	Bellflower	90706	562-804-8112	Health Center
Dollarhide H.C.	1108 N. Oleander	Compton	90220	310-763-2244	Health Center
El Monte Comp Center	10953 Ramona Blvd	El Monte	91731	626-579-8302	Health Center
El Monte Comp Center	10953 Ramona Blvd	El Monte	91731	800-383-4600	Health Center
Glendale H.C.	510 N. Glendale Ave	Glendale	91206	818-500-5785	Health Center
Glendale H.C.	510 N. Glendale Ave	Glendale	91206	818-500-5785	Health Center
H. Claude Hudson Comp. Center	2829 S. Grand Ave	Los Angeles	90710	213-744-3677 213-744-3701 (UC)	Comprehensive Health Center
H. Claude Hudson Comp. Center	2829 S. Grand Ave	Los Angeles	90710	800-383-4600 800-341-9211	Comprehensive Health Center
Harbor - UCLA Medical Center	1000 W. Carson Street	Torrance	90502	310 222-2345	Hospital
Harbor - UCLA Medical Center	1000 W. Carson Street	Torrance	90502	310 222-2101	Hospital
Harbor - UCLA Medical Center	1000 W. Carson Street	Torrance	90502	310 222-2151	Hospital
Harbor - UCLA Medical Center	1000 W. Carson Street	Torrance	90502	310 222-5200	Hospital
Harbor/UCLA Family Health Center	1403 W. Lomita Blvd	Harbor City	90710	310-534-7600	Health Center
Harbor/UCLA Family Health Center	1403 W. Lomita Blvd	Harbor City	90710	310-534-6203	Health Center
High Desert Health System	44900 N. 60th Street West	Lancaster	93536	(661) 948-8581	Multiservice Ambulatory Care Center
High Desert Health System	44900 N. 60th Street West	Lancaster	93536	(661) 723-4640	Multiservice Ambulatory Care Center
High Desert Health System	44900 N. 60th Street West	Lancaster	93536	(661) 948-8205	Multiservice Ambulatory Care Center
High Desert MACC	44900 N. 60th St W	Lancaster	93536	661-948-8581 661-723-4640	Multiservice Ambulatory Care Center
High Desert MACC	44900 N. 60th St W	Lancaster	93536	661-945-8205	Multiservice Ambulatory Care Center
Hubert H. Humphrey Comp. Center	5850 S. Main St	Los Angeles	90003	323-846-4312	Comprehensive Health Center
La Puente H.C.	15930 Central Ave	La Puente	91744	626-968-3711	Health Center
Lake L.A. Community Clinic	16921 East Ave O Space G	Lake L.A.	93591	661-945-8488	Health Center
Lake L.A. Community Clinic	16921 East Ave O Space G	Lake L.A.	93591	661-945-8205	Health Center
Littlerock Community Clinic	8201 Pearblossom Hwy	Littlerock	93543	661-945-8382	Health Center
Littlerock Community Clinic	8201 Pearblossom Hwy	Littlerock	93543	661-945-8205	Health Center
Long Beach Comp. H.C.	1333 Chestnut Blvd	Long Beach	90813	562-599-2153	Comprehensive Health Center
Martin Luther King, Jr. Multi-Service Ambulatory Care Center	12021 South Wilmington Avenue	Los Angeles	90059	310 668-4321	Hospital
Martin Luther King, Jr. Multi-Service Ambulatory Care Center	12021 South Wilmington Avenue	Los Angeles	90059	310 668-5201	Hospital

DHS FACILITIES					
Clinic Name	**Address**	**City**	**Zip**	**Phone**	**Org Type**
Martin Luther King, Jr. Multi-Service Ambulatory Care Center	12021 South Wilmington Avenue	Los Angeles	90059	310 668-3746	Hospital
Martin Luther King, Jr. Multi-Service Ambulatory Care Center	12021 South Wilmington Avenue	Los Angeles	90059	310 668-5011	Hospital
Martin Luther King, Jr. Multi-Service Ambulatory Care Center	12021 South Wilmington Avenue	Los Angeles	90059	310 668-5011	Hospital
MidValley Comp. H.C.	7515 Van Nuys Blvd	Van Nuys	91405	818-947-0230	Comprehensive Health Center
MLK Multi-Service Ambulatory Care	12021 S. Wilmington Ave	Los Angeles	90059	310-668-4321	Multiservice Ambulatory Care Center
MLK Multi-Service Ambulatory Care	12021 S. Wilmington Ave	Los Angeles	90059	310-668-5011	Multiservice Ambulatory Care Center
Olive View-UCLA Medical Center	14445 Olive View Dr.	Sylmar	91342	818 364-1555	Hospital
Olive View-UCLA Medical Center	14445 Olive View Dr.	Sylmar	91342	818 364-3001	Hospital
Olive View-UCLA Medical Center	14445 Olive View Dr.	Sylmar	91342	818 364-4813	Hospital
Olive View-UCLA Medical Center	14445 Olive View Dr.	Sylmar	91342	818 364-3184	Hospital
Olive View-UCLA Medical Center	14445 Olive View Dr.	Sylmar	91342	818 364-3184	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	562 401-7041 or 1-877-RANCHO 1	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	562 401-7022	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	562 401-7036	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	562 401-7041 or 1-877-RANCHO 1	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	562 401-7041 or 1-877-RANCHO 1	Hospital
Rancho Los Amigos National Rehabilitation Center	7601 E. Imperial Highway	Downey	90242	1-877-RANCHO 1 or 562-401-7041	Hospital
Roybal Comprehensive Health Center	245 S. Fetterly St	Los Angeles	90022	323-780-2373	Comprehensive Health Center
Roybal Comprehensive Health Center	245 S. Fetterly St	Los Angeles	90022	800-383-4600	Comprehensive Health Center
San Fernando H.C.	1212 Pico St.	San Fernando	91340	818-837-6969	Health Center
San Fernando H.C.	1212 Pico St.	San Fernando	91340	818-837-6969	Health Center
South Valley H.C.	38350 40th St. East	Palmdale	93552	661-272-5001	Health Center
South Valley H.C.	38350 40th St. East	Palmdale	93552	661-945-8205	Health Center
Wilmington H.C.	1325 Broad Ave	Wilmington	90744	310-518-8800	Health Center

Department of Health Services Clusters



Published Date: 10/30/2012

Exhibit V (Meaningful Use Criteria)

to the

Electronic Health Records System and Services Agreement

EXHIBIT V

MEANINGFUL USE CRITERIA

This Exhibit V (Meaningful Use Criteria) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. INTRODUCTION

The tables set forth in Section 2 (Meaningful Use Objectives and Clinical Quality Measures Tables) are the unedited summaries from the final regulations published by the Centers for Medicare and Medicaid Services ("**CMS**") establishing Stage 1 and Stage 2 Meaningful Use criteria and are provided for convenience of reference only. The summary tables are merely illustrative, not exhaustive, of the Meaningful Use criteria established by the final regulations published by CMS establishing Stage 1 and Stage 2 Meaningful User criteria, which are attached as Exhibit V.1 (Stage 1 Meaningful Use Criteria Regulations) and Exhibit V.2 (Stage 2 Meaningful Use Criteria Regulations). In the event of a conflict between this Exhibit V (Meaningful Use Criteria) and such regulations, the regulations, including any revisions, shall govern.

2. MEANINGFUL USE OBJECTIVES AND CLINICAL QUALITY MEASURES TABLES

2.1 STAGE 1 MEANINGFUL USE OBJECTIVES

Table 2: Stage 1 Meaningful Use Objectives and Associated Measures Sorted by Core and Menu Set

CORE SET			
Health Outcomes Policy Priority	**Stage 1 Objectives**		**Stage 1 Measures**
	Eligible Professionals	**Eligible Hospitals and CAHs**	
Improving quality, safety, efficiency, and reducing health	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical	More than 30% of unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAR's inpatient or emergency

CORE SET			
Health Outcomes Policy Priority	**Stage 1 Objectives**		**Stage 1 Measures**
	Eligible Professionals	**Eligible Hospitals and CAHs**	
disparities	orders into the medical record per state, local and professional guidelines	record per state, local and professional guidelines	department (POS 21 or 23) have at least one medication order entered using CPOE
	Implement drug-drug and drug-allergy interaction checks	Implement drug-drug and drug-allergy interaction checks	The EP/eligible hospital/CAR has enabled this functionality for the entire ERR reporting period
	Generate and transmit permissible prescriptions electronically (eRx)		More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified ERR technology
	Record demographics ○ preferred language ○ gender ○ race ○ ethnicity ○ date of birth	Record demographics ○ preferred language ○ gender ○ race ○ ethnicity ○ date of birth ○ date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data
	Maintain an up-to-date problem list of current and active diagnoses	Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAR's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data

CORE SET			
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	Maintain active medication list	Maintain active medication list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
	Maintain active medication allergy list	Maintain active medication allergy list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
	Record and chart changes in vital signs: ○ Height ○ Weight ○ Blood pressure ○ Calculate and display BMI ○ Plot and display growth charts for children 2-20 years, including BMI	Record and chart changes in vital signs: ○ Height ○ Weight ○ Blood pressure ○ Calculate and display BMI ○ Plot and display growth charts for children 2-20 years, including BMI	For more than 50% of all unique patients age 2 and over seen by the EP or admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structured data
	Record smoking status for	Record smoking status for patients	For more than 50% of all unique patients 13 years old or older seen by the EP or admitted

CORE SET			
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	patients 13 years old and older	13 years old and older	to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data
	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance that rule	Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule	Implement one clinical decision support rule
	Report ambulatory clinical quality measures to CMS or the States	Report hospital clinical quality measures to CMS or the States	For 2011, provide aggregate numerator, denominator, and exclusions through attestation as discussed in section II(A)(3) of this final rule.
			For 2012, electronically submit the clinical quality measures as discussed in section II(A)(3) of this final rule.
Engage patients and families in their health Care	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the EP or the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days.
		Provide patients with an electronic copy of their discharge instructions at time of discharge,	More than 50% of all patients who are discharged from an eligible hospital or CAH's inpatient department or emergency department (POS 21 or 23) and who request

CORE SET			
Health Outcomes Policy Priority	Stage 1 Objectives		Stage 1 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
		upon request	an electronic copy of their discharge instructions are provided it
	Provide clinical summaries for patients for each office visit		Clinical summaries provided to patients for more than 50% of all office visits within 3 business days
Improve care coordination	Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information
Ensure adequate privacy and security protections for personal health information	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis per 45 CFR 164.308 (a)(I) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process

MENU SET			
Health Outcomes	Stage 1 Objectives		Stage 1 Measures
Policy Priority	Eligible Professionals	Eligible Hospitals and CAHs	

Improving quality, safety, efficiency, and reducing health disparities	Implement drug-formulary checks	Implement drug-formulary checks	The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external drug formulary for the entire ERR reporting period
		Record advance directives for patients 65 years old or older	More than 50% of all unique patients 65 years old or older admitted to the eligible hospital's or CAR's inpatient department (POS 21) have an indication of an advance directive status recorded
	Incorporate clinical lab-test results into certified EHR technology as structured data	Incorporate clinical lab-test results into certified EHR technology as structured data	More than 40% of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital or CAR for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data
	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition
	Send reminders to patients per patient preference for preventive/ follow up care		More than 20% of all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder ·during the EHR reporting period
Engage patients and families in their health	Provide patients with timely electronic access to their health		More than 10% of all unique patients seen by the EP are provided timely (available to the

care	information (including lab results, problem list, medication lists, medication allergies) within. four business days of the information being available to the EP		patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information
	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources
Improve care coordination	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)
	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who. transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals

Improve population and public health[2]	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)
		Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)
	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)

[2] Unless an EP, eligible hospital or CAH has an exception for all of these objectives and measures they must complete at least one as part of their demonstration of the menu set in order to be a meaningful EHR user.

2.3 CLINICAL QUALITY MEASURES

TABLE 10: Clinical Quality Measures for Submission by Eligible Hospitals and CAHs for Payment Year 2011-2012

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
Emergency Department (ED)-l NQF 0495	**Title:** Emergency Department Throughput – admitted patients Median time from ED arrival to ED departure for admitted patients **Description:** Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department **Measure Developer:** CMS/Oklahoma Foundation for Medical Quality (OFMQ)	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
ED-2 NQF 0497	**Title:** Emergency Department Throughput – admitted patients Admission decision time to ED departure time for admitted patients **Description:** Median time from admit decision time to time of departure from the emergency department of emergency department patients admitted to inpatient status **Measure Developer:** CMS/OFMQ	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-2 NQF 0435	**Title:** Ischemic stroke - Discharge on anti-thrombotics **Description:** Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-3 NQF 0435	**Title:** Ischemic stroke - Anticoagulation for A-fib/flutter **Description:** Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-4 NQF 0437	**Title:** Ischemic stroke - Thrombolytic therapy for patients arriving within 2 hours of symptom onset **Description:** Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom TV t-PA was initiated at this hospital within 3 hours of time last known well. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-5	**Title:** Ischemic or hemorrhagic stroke – Antithrombotic therapy by day 2 **Description:** Ischemic stroke patients administered antithrombotic therapy by the end of	http://www.cms.gov/QualityMeasures/03_Ele

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
NQF 0438	hospital day 2. **Measure Developer:** The Joint Commission	ctronicSpecifications.asp#TopOfPage
Stroke-6 NQF 0439	**Title:** Ischemic stroke - Discharge on statins **Description:** Ischemic stroke patients with LDL ~ 100 mg/dL, or LDL not measured, or, who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-8 NQF 0440	**Title:** Ischemic or hemorrhagic stroke - Stroke education **Description:** Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-10 NQF 0441	**Title:** Ischemic or hemorrhagic stroke – Rehabilitation assessment **Description:** Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Venous Thromboembolism (VTE)-1 NQF 0371	**Title:** VTE prophylaxis within 24 hours of arrival **Description:** This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-2 NQF 0372	**Title:** Intensive Care Unit VTE prophylaxis **Description:** This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer). **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
VTE-3 NQF 0373	**Title:** Anticoagulation overlap therapy **Description:** This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications. Overlap therapy must be administered for at least five days with an international normalized ratio (INR) ≥ 2 prior to discontinuation of the parenteral anticoagulation therapy or the patient must be discharged on both medications. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-4 NQF 0374	**Title:** Platelet monitoring on unfractionated heparin **Description:** This measure assesses the number of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-5 NQF 0375	**Title:** VTE discharge instructions **Description:** This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, to home with home health, home hospice or discharged/transferred to court/law enforcement on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-6 NQF 0376	**Title:** Incidence of potentially preventable VTE **Description:** This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present on arrival) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage

TABLE 7: Measure Group: Core for All EPs, Medicare and Medicaid

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title
NQF 0013	**Title:** Hypertension: Blood Pressure Measurement
NQF 0028	**Title:** Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment b. Tobacco Cessation Intervention
NQF 0421 PQRI 128	**Title:** Adult Weight Screening and Follow-up
	Alternate Core Measures
NQF 0024	**Title:** Weight Assessment and Counseling for Children and Adolescents
NQF 0041 PRQI 110	**Title:** Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old
NQF 0038	**Title:** Childhood Immunization Status

Table 6: Clinical Quality Measures for Submission by Medicare or Medicaid EPs for the 2011 and 2012 Payment Year

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0059 PQRI 1	**Title**: Diabetes: Hemoglobin Alc Poor Control **Description**: Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had hemoglobin Alc >9.0%.	**National Committee for Quality Assurance (NCQA) Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0064 PQRI 2	**Title:** Diabetes: Low Density Lipoprotein (LDL) Management and Control **Description:** Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had LDL-C < 100 mg/dL).	**NCQA Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0061 PQRI 3	**Title:** Diabetes: Blood Pressure Management **Description:** Percentage of patients 18 - 75	**NCQA Contact Information**:	http://www.cms.gov/QualityMeasures/03_Ele	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	years of age with diabetes (type 1 or type 2) who had blood pressure <140/90 mmHg.	www.ncqa.org	ctronicSpecifications.asp#TopOfPage	
NQF 0081 PQRI 5	**Title:** Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) **Description:** Percentage of patients aged 18 years and older with a diagnosis of heart failure and LVSD (LVEF < 40%) who were prescribed ACE inhibitor or ARB therapy.	**American Medical Association-sponsored Physician Consortium for Performance Improvement (AMA-PCPI) Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0070 PQRI 7	**Title:** Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI) **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD and prior MI who were prescribed beta-blocker therapy.	**AMA-PCPI Contact Information**: cpe@ama-assn.orgv	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0041 PQRI 110	**Title:** Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old **Description:** Percentage of patients aged 50 years and older who received an influenza immunization during the flu season (September through February).	**AMA-PCPI Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0043 PQRI 111	**Title:** Pneumonia Vaccination Status for Older Adults **Description:** Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.	**NCQA Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0031 PQRI 112	**Title:** Breast Cancer Screening **Description:** Percentage of women 40-6.9 years of age who	**NCQA Contact Information**:	http://www.cms.gov/QualityMeasures/03_Ele	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	had a mammogram to screen for breast cancer.	www.ncqa.org	ctronicSpecifications.asp#TopOfPage	
NQF 0034 PQRI 113	**Title:** Colorectal Cancer Screening **Description:** Percentage of adults 50-75 years of age who had appropriate screening for colorectal cancer.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0067 PQRI 6	**Title:** Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed oral antiplatelet therapy.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0083 PQRI 8	**Title:** Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) **Description:** Percentage of patients aged 18 years and older with a diagnosis of heart failure who also have LVSD (LYEF < 40%) and who were prescribed beta-blocker therapy.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0105 PQRI 9	**Title:** Anti-depressant medication management: (a) Effective Acute Phase Treatment, (b) Effective Continuation Phase Treatment **Description:** The percentage of patients 18 years of age and older who Were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0086 PQRI 12	**Title:** Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation **Description:** Percentage	**AMA-PCPI** **Contact Information**:	http://www.cms.gov/QualityMeasures/03_Ele	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	of patients aged 18 years and older with a diagnosis of POAG who have been seen for at least two office visits who have an optic nerve head evaluation during one or more office visits within 12 months.	cpe@ama-assn.org	ctronicSpecifications.asp#TopOfPage	
NQF 0088 PQRI 18	**Title:** Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy **Description:** Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0089 PQRI 19	**Title:** Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care **Description:** Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0047 PQRI 53	**Title:** Asthma Pharmacologic Therapy **Description:** Percentage of patients aged 5 through 40 years with a diagnosis of mild, moderate, or severe persistent asthma who	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment.			
NQF 0001 PQRI 64	**Title:** Asthma Assessment **Description:** Percentage of patients aged 5 through 40 years with a diagnosis of asthma and who have been seen for at least 2 office visits, who were evaluated during at least one office visit within 12 months for the frequency (numeric) of daytime and nocturnal asthma symptoms.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0002 PQRI 66	**Title:** Appropriate Testing for Children with Pharyngitis **Description:** Percentage of children 2-18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus (strep) test for the episode.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0387 PQRI 71	**Title:** Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer **Description:** Percentage of female patients aged 18 years and older with Stage IC through IIIC, ER or PR positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0385 PQRI 72	**Title:** Oncology Colon Cancer: Chemotherapy for Stage 1II Colon Cancer Patients **Description:** Percentage of patients aged 18 years and older with Stage IIIA through IIIC	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	colon cancer who are referred for adjuvant chemotherapy, prescribed adjuvant chemotherapy, or have previously received adjuvant chemotherapy within the 12-month reporting period.			
NQF 0389 PQRI 102	**Title:** Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients **Description:** Percentage of patients, regardless of age, with a diagnosis of prostate cancer at low risk of recurrence receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the radical prostatectomy, OR cryotherapy who did not have prostate, OR a bone scan performed at any time since diagnosis of prostate cancer.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0027 PQRI 115	**Title:** Smoking and Tobacco Use Cessation, Medical assistance: a. Advising Smokers and Tobacco Users to Quit, b. Discussing Smoking and Tobacco Use Cessation Medications, c. Discussing Smoking and Tobacco Use Cessation Strategies **Description:** Percentage of patients 18 years of age and older who were current smokers or tobacco users, who were seen by a practitioner during the measurement year and who received advice to quit smoking or tobacco use or whose practitioner recommended or discussed smoking or tobacco use cessation medications, methods or strategies.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0055	**Title:** Diabetes: Eye Exam	**AMA-PCPI**	http://www.cms.gov/Q	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
PQRI 117	**Description:** Percentage of patients 18 -75 years of age with diabetes (type 1 or type 2) who had a retinal or dilated eye exam or a negative retinal exam (no evidence of retinopathy) by an eye care professional.	**Contact Information**: cpe@ama-assn.org	ualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0062 PQRI 119	**Title:** Diabetes: Urine Screening **Description:** Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had a nephropathy screening test or evidence of nephropathy.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0421 PQRI 128	**Title:** Adult Weight Screening and Follow-Up **Description:** Percentage of patients aged 18 years and older with a calculated 8MI in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside parameters, a follow-up plan is documented.	**CMS/Quality Insights of Pennsylvania (QIP)** **Contact Information**: www.usqualitymeasures.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core
NQF 0056 PQRI 163	**Title:** Diabetes: Foot Exam **Description:** The percentage of patients aged 18 – 75 years with diabetes (type I or type 2) who had a foot exam (visual inspection, sensory exam with monofilament, or pulse exam).	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0074 PQRI 197	**Title:** Coronary Artery Disease (CAD): Drug Therapy for Lowering LDL-Cholesterol **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed a lipid-lowering therapy (based on current ACC/AHA guidelines).	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0084	**Title:** Heart Failure (HF): Warfarin Therapy	**AMA-PCPI**	http://www.cms.gov/Q	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
PQRI 200	Patients with Atrial Fibrillation **Description:** Percentage of all patients aged 18 years and older with a diagnosis of heart failure and paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy.	**Contact Information**: cpe@ama-assn.org	ualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0073 PQRI 201	**Title:** Ischemic Vascular Disease (IVD): Blood Pressure Management **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January **1-** November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and whose recent blood pressure is in control (<140/90mmHg).	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0068 PQRI 204	**Title:** Ischemic Vascular Disease (IVD); Use of Aspirin or Another Antithrombotic **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January I-November I of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	to the measurement year and who had documentation of use of aspirin or another antithrombotic during the measurement year.			
NQF 0004	**Title:** Initiation and Engagement of Alcohol and Other Drug Dependence Treatment: (a) Initiation, (b) Engagement **Description:** The percentage of adolescent and adult patients with a new episode of alcohol and other drug (AOD) dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis and who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0012	**Title:** Prenatal Care: Screening for Human Immunodeficiency Virus (HIV) **Description:** Percentage of patients, regardless of age, who gave birth during a 12-month period who were screened for HIV infection during the first or second prenatal care visit.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0013	**Title:** Hypertension: Blood Pressure Measurement **Description:** Percentage of patient visits for patients aged 18 years and older with a diagnosis of hypertension who have been seen for at least 2 office visits, with blood pressure (BP) recorded.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core
NQF 0014	**Title:** Prenatal Care: Anti-D Immune Globulin	**AMA-PCPI**	http://www.cms.gov/Q	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	Description: Percentage ofD (Rh) negative, unsensitized patients, regardless of age, who gave birth during a 12-month period who received anti-D immune globulin at 26-30 weeks gestation.	**Contact Information**: cpe@ama-assn.org	ualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0018	**Title:** Controlling High Blood Pressure **Description:** The percentage of patients 18-85 years of age who had a diagnosis of hypertension and whose BP was adequately controlled during the measurement year	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0024	**Title:** Weight Assessment and Counseling for Children and Adolescents **Description:** Percentage of patients 2 -17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or OB/GYN and who had evidence of BMI percentile documentation, counseling for nutrition measurement year.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0028	**Title:** Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention **Description:** Percentage of patients aged 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use one or more times within 24 months b. Percentage of patients aged 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core
NQF 0032	**Title:** Cervical Cancer Screening **Description:**	**NCQA**	http://www.cms.gov/Q	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	Percentage of women 21-64 years of age, who received one or more Pap tests to screen for cervical cancer	**Contact Information**: www.ncqa.org	ualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0033	**Title:** Chlamydia Screening for Women **Description:** Percentage of women 15- 24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0036	**Title:** Use of Appropriate Medications for Asthma **Description:** Percentage of patients 5 - 50 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement year. Report three age stratifications (5-11 years, 12-50 years, and total).	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0038	**Title:** Childhood Immunization Status **Description:** Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio(IPV), one measles, mumps and rubella (MMR); two H influenza type B (Hi B); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); two hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0052	**Title:** Low Back Pain: Use of Imaging Studies **Description:** Percentage of patients with a	**NCQA** **Contact Information**:	http://www.cms.gov/QualityMeasures/03_Ele	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
	primary diagnosis of low back pain who did not have an imaging study (plain x-ray, MRI, CT scan) within 28 days of diagnosis.	www.ncqa.org	ctronicSpecifications.asp#TopOfPage	
NQF 0075	**Title:** Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABO) or percutaneous transluminal angioplasty (PTCA) from January 1-November l of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had a complete lipid profile performed during the measurement year and whose LDL-C<IOO mg/dL.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0575	**Title:** Diabetes: Hemoglobin Ale Control «8.0%) **Description:** The percentage of patients 18-75 years of age with diabetes (type I or type 2) who had hemoglobin Alc<8.0%.	**NCQA** **Contact Information**: www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

2.4 CHANGES TO STAGE 1 MEANINGFUL USE OBJECTIVES.

Table 4 – Stage 1 Changes

Stage 1 Objective	Final Changes	Effective year (CY/FY)
Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter	Change: Addition of an alternative measure More than 30 percent of medication orders created by the EP or authorized	2013—Onward (Optional).

Stage 1 Objective	Final Changes	Effective year (CY/FY)
orders into the medical record per state, local and professional guidelines	providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE	
Generate and transmit permissible prescriptions electronically (eRx)	Change: Addition of an additional exclusion Any EP who: does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period	2013—Onward (Required).
Record and chart changes in vital signs	Change: Addition of alternative age limitations More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height and weight (for all ages) recorded as structured data	2013 Only (Optional).
Record and chart changes in vital signs	Change: Addition of alternative exclusions Any EP who (*1*) Sees no patients 3 years or older is excluded from recording blood pressure; (*2*) Believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them; (*3*) Believes that height and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or (*4*) Believes that blood pressure is relevant to their scope of practice, but height and weight are not, is excluded from recording height and weight.	

Stage 1 Objective	Final Changes	Effective year (CY/FY)
Record and chart changes in vital signs	Change: Age limitations on height, weight and blood pressure More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height and weight (for all ages) recorded as structured data.	2014—Onward (Required).
Record and chart changes in vital signs	Change: Changing the age and splitting the EP exclusion Any EP who (*1*) Sees no patients 3 years or older is excluded from recording blood pressure; (*2*) Believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them; (*3*) Believes that height and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or (*4*) Believes that blood pressure is relevant to their scope of practice, but height and weight are not, is excluded from recording height and weight.	2014—Onward (Required).
Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, and diagnostic test results), among providers of care and patient authorized entities electronically	Change: Objective is no longer required	2013—Onward (Required).
Report ambulatory (hospital) clinical quality measures to CMS or the states	Change: Objective is incorporated directly into the definition of a meaningful EHR user and eliminated as an objective under § 495.6	2013—Onward (Required).

Stage 1 Objective	Final Changes	Effective year (CY/FY)
EP and Hospital Objectives: Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, medication allergies, discharge summary, procedures) upon request Hospital Objective: Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request EP Objective: Provide patients with timely electronic access to their health information (including lab results, problem list, medicatiion lists, and allergies) within 4 business days of the information being available to the EP.	Change: Replace these four objectives with the Stage 2 objective and one of the two Stage 2 measures. EP Objective: Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP. EP Measure: More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information. Hospital Objective: Provide patients the ability to view online, download, and transmit information about a hospital admission. Hospital Measure: More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge	2014—Onward (Required).
Public Health Objectives:	Change: Addition of “except where prohibited” to the objective regulation text for the public health objectives under § 495.6	2013—Onward (Required).

Stage 1 Policy Changes		
Meeting an exclusion for a menu set objective counts towards the number of menu set objectives that must be satisfied to meet meaningful use	Meeting an exclusion for a menu set objective does not count towards the number of menu set objectives that must be satisfied to meet meaningful use.	2014—Onward (Required).

2.5 STAGE 2 MEANINGFUL USE OBJECTIVES

Table B5 – Stage 2 Objectives and Measures

CORE SET			
Health Outcomes Policy Priority	**Stage 2 Objectives**		**Stage 2 Measures**
	Eligible Professionals	**Eligible Hospitals and CAHs**	
Improving quality, safety, efficiency, and reducing health disparities	Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 60 percent of medication, 30 percent of laboratory, and 30 percent of radiology orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.
	Generate and transmit permissible prescriptions electronically (eRx)		More than 50 percent of all permissible prescriptions, or all prescriptions written by the EP and queried for a drug formulary and transmitted electronically using CEHRT.
	Record the following demographics: • Preferred language • Sex • Race • Ethnicity • Date of birth	Record the following demographics: • Preferred language • Sex • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.	More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have demographics recorded as structured data.
	Record and chart changes in vital signs: • Height/length •	Record and chart changes in vital signs: • Height/length • Weight •	More than 80 percent of all unique patients seen by the EP or admitted to the eligible

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	Weight • Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0-20 years, including BMI	Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0-20 years, including BMI	hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.
	Record smoking status for patients 13 years old or older	Record smoking status for patients 13 years old or older	More than 80 percent of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period have smoking status recorded as structured data.
	Use clinical decision support to improve performance on high-priority health conditions	Use clinical decision support to improve performance on high-priority health conditions	1. Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an EP, eligible hospital or CAH's scope of practice or patient population, the clinical decision support interventions must be related to high-priority health conditions. It is suggested that one of the five clinical decision support interventions be related to improving healthcare efficiency. 2. The EP, eligible hospital, or CAH has enabled and implemented the functionality for drug and drug allergy interaction checks for the entire EHR reporting period.

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	Incorporate clinical lab-test results into Certified EHR Technology as structured data.	Incorporate clinical lab-test results into Certified EHR Technology as structured data	More than 55 percent of all clinical lab tests results ordered by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative affirmation or numerical format are incorporated in Certified EHR Technology as structured data.
	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition.
	Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care and send these patients the reminder, per patient preference		More than 10 percent of all unique patients who have had two or more office visits with the EP within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference when available.
		Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).	More than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR.

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
Engage patients and families in their health care	Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.		1. More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information. 2. More than 5 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download, or transmit to a third party their health information.
		Provide patients the ability to view online, download, and transmit information about a hospital admission.	1. More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge. 2. More than 5 percent of all patients (or their authorized representatives) who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the reporting period.
	Provide clinical summaries for patients for each office visit		Clinical summaries provided to patients or patient-authorized representatives within 1 business day for more than 50 percent of office visits.
	Use Certified EHR Technology	Use Certified EHR Technology to	Patient-specific education resources identified

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	to identify patient-specific education resources and provide those resources to the patient	identify patient-specific education resources and provide those resources to the patient	by CEHRT are provided to patients for more than 10 percent of all unique patients with office visits seen by the EP during the EHR reporting period. More than 10 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.
	Use secure electronic messaging to communicate with patients on relevant health information		A secure message was sent using the electronic messaging function of Certified EHR Technology by more than 5 percent of unique patients (or their authorized representatives) seen by the EP during the EHR reporting period.
Improve care coordination	The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.	The eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).
	The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each	The eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each	1. The EP, eligible hospital, or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals. 2. The EP, eligible hospital or CAH that transitions

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	transition of care or referral	transition of care or referral	or refers their patient to another setting of care or provider of care provides a summary of care record for more than 10% of such transitions and referrals either—(a) electronically transmitted using CEHRT to a recipient or (b) where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. 3. An EP, eligible hospital or CAH must satisfy one of the two following criteria: (A) Conducts one or more successful electronic exchanges of a summary of care document, as part of which is counted in "measure 2" (for EPs the measure at § 495.6(j)(14)(ii)(B) and for eligible hospitals and CAHs the measure at § 495.6(l)(11)(ii)(B)) with a recipient who has EHR technology that was developed designed by a different EHR technology developer than the sender's EHR technology certified to 45 CFR 170.314(b)(2); or (B) Conducts one or more successful tests with the CMS designated test EHR during the EHR reporting period.
Improve population and public health	Capability to submit electronic data to immunization registries or immunization information systems except where	Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in	Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire

CORE SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	prohibited, and in accordance with applicable law and practice	accordance with applicable law and practice	EHR reporting period.
		Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice	Successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to public health agencies for the entire EHR reporting period.
		Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice	Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.
Ensure adequate privacy and security protections for personal health information	Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities	Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in CEHRT in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

MENU SET			
Health Outcomes Policy Priority	**Stage 2 Objectives**		**Stage 2 Measures**
	Eligible Professionals	**Eligible Hospitals and CAHs**	
Improving quality, safety, efficiency, and reducing health disparities		Record whether a patient 65 years old or older has an advance directive	More than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period have an indication of an advance directive status recorded as structured data.
	Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.	Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.	More than 10 percent of all tests whose result is one or more images ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period are accessible through Certified EHR Technology.
	Record patient family health history as structured data	Record patient family health history as structured data	More than 20 percent of all unique patients seen by the EP or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.
		Generate and transmit permissible discharge prescriptions electronically (eRx)	More than 10 percent of hospital discharge medication orders for permissible prescriptions (for new, changed, and refilled prescriptions) are queried for a drug formulary and transmitted electronically using Certified EHR Technology.
	Record electronic notes in patient records	Record electronic notes in patient records	Enter at least one electronic progress note created, edited and signed by an eligible professional for more than 30 percent of unique

MENU SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
			patients with at least one office visit during the EHR reporting period. Enter at least one electronic progress note created, edited and signed by an authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) for more than 30 percent of unique patients admitted to the eligible hospital or CAH's inpatient or emergency department during the EHR reporting period. Electronic progress notes must be text-searchable. Non-searchable notes do not qualify, but this does not mean that all of the content has to be character text. Drawings and other content can be included with searchable text notes under this measure.
		Provide structured electronic lab results to ambulatory providers	Hospital labs send structured electronic clinical lab results to the ordering provider for more than 20 percent of electronic lab orders received.
Improve Population and Public Health	Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice		Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.
	Capability to identify and report cancer cases to a public health central cancer registry,		Successful ongoing submission of cancer case information from CEHRT to a public health central cancer registry for the entire EHR

MENU SET			
Health Outcomes Policy Priority	Stage 2 Objectives		Stage 2 Measures
	Eligible Professionals	Eligible Hospitals and CAHs	
	except where prohibited, and in accordance with applicable law and practice.		reporting period.
	Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.		Successful ongoing submission of specific case information from Certified EHR Technology to a specialized registry for the entire EHR reporting period.

2.6 CLINICAL QUALITY MEASURES

Table 10—Clinical Quality Measures Finalized for Eligible Hospitals and CAHs Beginning With FY 2014

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0495	Title: Emergency Department (ED)-1 Emergency Department Throughput—Median time from ED arrival to ED departure for admitted ED patients Description: Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department.	CMS/Oklahoma Foundation for Medical Quality (OFMQ) Qualitynet.org and click on "Questions & Answers"	IQR		Patient and Family Engagement.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0497	Title: ED-2 Emergency Department Throughput—admitted patients—Admit decision time to ED departure time for admitted patients Description: Median time (in minutes) from admit decision time to time of departure from the emergency department for emergency department patients admitted to inpatient status.	CMS/OFMQ Qualitynet.org and click on "Questions & Answers"	IQR		Patient and Family Engagement.
0435	Title: Stroke-2 Ischemic stroke—Discharged on anti-thrombotic therapy Description: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Clinical Process/Effectiveness.
0436	Title: Stroke-3 Ischemic stroke—Anticoagulation Therapy for Atrial Fibrillation/Flutter Description: Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Clinical Process/Effectiveness.
0437	Title: Stroke-4 Ischemic stroke—Thrombolytic Therapy Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours (120 minutes) of time last known well and for whom IV t-PA was initiated at this hospital within 3 hours (180 minutes) of time last known well.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Clinical Process/Effectiveness.
0438	Title: Stroke-5 Ischemic stroke—Antithrombotic therapy by end of hospital day two Description:	The Joint Commission www.jointcommission.org	IQR		Clinical Process/Effec

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	Ischemic stroke patients administered antithrombotic therapy by the end of hospital day two.	and click on "Contact Us"			tiveness.
0439	Title: Stroke-6 Ischemic stroke—Discharged on Statin Medication Description: Ischemic stroke patients with LDL greater than or equal to 100 mg/dL, or LDL not measured, or, who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Clinical Process/Effec tiveness.
0440	Title: Stroke-8 Ischemic or hemorrhagic stroke—Stroke education Description: Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Patient & Family Engagement.
0441	Title: Stroke-10 Ischemic or hemorrhagic stroke—Assessed for Rehabilitation Description: Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR		Care Coordination.
0371	Title: Venous Thromboembolism (VTE)-1 VTE prophylaxis Description: This measure assesses the number of patients who received VTE prophylaxis or	The Joint Commission www.jointcommission.org	IQR		Patient Safety.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.	and click on “Contact Us”			
0372	Title: VTE-2 Intensive Care Unit (ICU) VTE prophylaxis Description: This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer).	The Joint Commission www.jointcommission.org and click on “Contact Us”	IQR		Patient Safety.
0373	Title: VTE-3 VTE Patients with Anticoagulation OverlapTherapy Description: This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications or have a reason for discontinuation of overlap therapy. Overlap therapy must be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, discharged on both medications or have a reason for discontinuation of	The Joint Commission www.jointcommission.org and click on “Contact Us”	IQR	New	Clinical Process/Effectiveness.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	overlap therapy.				
0374	Title: VTE-4 VTE Patients Receiving Unfractionated Heparin (UFH) with Dosages/Platelet Count Monitoring by Protocol (or Nomogram) Description: This measure assesses the number of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR	New	Clinical Process/Effectiveness.
0375	Title: VTE-5 VTE discharge instructions Description: This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement, or home on hospice care on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR	New	Patient and Family Engagement.
0376	Title: VTE-6 Incidence of potentially preventable VTE Description: This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order	The Joint Commission www.jointcommission.org and click on "Contact Us"	IQR	New	Patient Safety.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	date.				
0142	Title: AMI-2-Aspirin Prescribed at Discharge for AMI Description: Acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR	New	Clinical Process/Effectiveness.
0469	Title: PC-01 Elective Delivery Prior to 39 Completed Weeks Gestation Description: Patients with elective vaginal deliveries or elective cesarean sections at >= 37 and <39 weeks of gestation completed.	The Joint Commission (TJC) www.jointcommission.org and click on "Contact Us"	TJC		Clinical Process/Effectiveness.
0164	Title: AMI-7a—Fibrinolytic Therapy Received Within 30 minutes of Hospital Arrival Description: Acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, HVBP	New	Clinical Process/Effectiveness.
0163	Title: AMI-8a—Primary PCI Received Within 90 Minutes of Hospital Arrival Description: Acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary PCI during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, HVBP	New	Clinical Process/Effectiveness.
0639	Title: AMI-10 Statin Prescribed at Discharge	CMS/OFMQ	IQR	New	Clinical

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	Description: Acute Myocardial Infarction (AMI) patients who are prescribed a statin at hospital discharge.	www.qualitynet.org and click on "Questions & Answers"			Process/Effectiveness.
0147	Title: PN-6—Initial Antibiotic Selection for Community-Acquired Pneumonia (CAP) in Immunocompetent Patients Description: Immunocompetent patients with Community-Acquired Pneumonia who receive an initial antibiotic regimen during the first 24 hours that is consistent with current guidelines.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, HVBP	New	Efficient Use of Healthcare Resources.
0527	Title: SCIP-INF-1 Prophylactic Antibiotic Received within 1 Hour Prior to Surgical Incision Description: Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received Vancomycin or a Fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within 2 hours prior to surgical incision. Due to the longer infusion time required for Vancomycin or a Fluoroquinolone, it is acceptable to start these antibiotics within 2 hours prior to incision time.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, HVBP	New	Patient Safety.
0528	Title: SCIP-INF-2-Prophylactic Antibiotic Selection for Surgical Patients Description: Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, HVBP	New	Efficient Use of Healthcare Resources.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	procedure).				
0453	Title: SCIP-INF-9—Urinary catheter removed on Postoperative Day 1 (POD1) or Postoperative Day 2 (POD2) with day of surgery being day zero. Description: Surgical patients with urinary catheter removed on Postoperative Day 1 or Postoperative Day 2 with day of surgery being day zero.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	IQR, TJC	New	Patient Safety.
0496	Title: ED-3—Median time from ED arrival to ED departure for discharged ED patients. Description: Median time from emergency department arrival to time of departure from the emergency room for patients discharged from the emergency department.	CMS/OFMQ www.qualitynet.org and click on "Questions & Answers"	OQR	New	Care Coordination.
0338	Title: Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver Description: An assessment that there is documentation in the medical record that a Home Management Plan of Care (HMPC) document was given to the pediatric asthma patient/caregiver.	The Joint Commission (TJC) www.jointcommission.org and click on "Contact Us"	state use	New	Patient & Family Engagement.
0480	Title: Exclusive Breast Milk Feeding Description: Exclusive breast milk feeding during the newborn's entire hospitalization.	The Joint Commission (TJC) www.jointcommission.org and click on "Contact Us"	state use	New	Clinical Process/Effectiveness.
0716	Title: Healthy Term Newborn Description: Percent of term singleton live births (excluding those with	California Maternal Quality Care Collaborative	state use	New	Patient Safety.

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
	diagnoses originating in the fetal period) who DO NOT have significant complications during birth or the nursery care.	www.cmqcc.org and click on "Contact Us"			
1354	Title: EHDI-1a—Hearing screening prior to hospital discharge Description: This measure assesses the proportion of births that have been screened for hearing loss before hospital discharge.	CDC www.cdc.gov and click on "Contact CDC"	state use	New	Clinical Process/Effectiveness.
*** IQR = Inpatient Quality Reporting.					
TJC = The Joint Commission.					
HVBP = Hospital Value-Based Purchasing.					
OQR = Outpatient Quality Reporting.					

Table 8—Clinical Quality Measures Finalized for Medicare and Medicaid EPs Beginning with CY 2014

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0002**	Title: Appropriate Testing for Children with Pharyngitis Description: Percentage of children 2-18 years of age who were diagnosed with pharyngitis, ordered an antibiotic and received a group A streptococcus (strep) test for the episode.	National Committee for Quality Assurance (NCQA) Contact information: www.ncqa.org	EHR PQRS, CHIPRA		Efficient Use of Healthcare Resources.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0004	Title: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment Description: Percentage of patients 13 years of age and older with a new episode of alcohol and other drug (AOD) dependence who received the following. Two rates are reported.	NCQA Contact Information: www.ncqa.org	EHR PQRS, HEDIS, state use, ACA 2701, NCQA-PCMH Recognition		Clinical Process/Effectiveness.
	a. Percentage of patients who initiated treatment within 14 days of the diagnosis.				
	b. Percentage of patients who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.				
NQF 0018*	Title: Controlling High Blood Pressure Description: Percentage of patients 18-85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90mmHg) during the measurement =period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS, UDS		Clinical Process/Effectiveness.
NQF 0022*	Title: Use of High-Risk Medications in the Elderly Description: Percentage of patients 66 years of age and older who were ordered high-risk medications. Two rates are reported.	NCQA Contact Information: www.ncqa.org	PQRS	New	Patient Safety
	a. Percentage of patients who were ordered at				

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	least one high-risk medication.				
	b. Percentage of patients who were ordered at least two different high-risk medications.				
NQF 0024**	Title: Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	NCQA Contact information: www.ncqa.org	EHR PQRS, UDS		Population/Public Health.
	Description: Percentage of patients 3-17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or Obstetrician/Gynecologist (OB/GYN) and who had evidence of the following during the measurement period. Three rates are reported				
	• Percentage of patients with height, weight, and body mass index (BMI) percentile documentation				
	• Percentage of patients with counseling for nutrition				
	• Percentage of patients with counseling for physical activity				
NQF 0028*	Title: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention. Description: Percentage of patients aged 18	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS, ACO, Group Reporting		Population/Public Health.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user.		PQRS, UDS		
NQF 0031	Title: Breast Cancer Screening Description: Percentage of women 40-69 years of age who had a mammogram to screen for breast cancer.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS, ACA 2701, HEDIS, state use, NCQA-PCMH Recognition		Clinical Process/Effectiveness.
NQF 0032	Title: Cervical Cancer Screening Description: Percentage of women 21-64 years of age, who received one or more Pap tests to screen for cervical cancer.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACA 2701, HEDIS, state use, NCQA-PCMH Recognition, UDS		Clinical Process/Effectiveness.
NQF 0033**	Title: Chlamydia Screening for Women Description: Percentage of women 16-24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, CHIPRA, ACA 2701, HEDIS, state use, NCQA-PCMH Recognition		Population/Public Health.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0034	Title: Colorectal Cancer Screening Description: Percentage of adults 50-75 years of age who had appropriate screening for colorectal cancer.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS, NCQA-PCMH Recognition		Clinical Process/Effectiveness.
NQF 0036**	Title: Use of Appropriate Medications for Asthma Description: Percentage of patients 5-64 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS		Clinical Process/Effectiveness.
NQF 0038**	Title: Childhood Immunization Status Description: Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV), one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.	NCQA Contact Information: www.ncqa.org	EHR PQRS, UDS		Population/Public Health.
NQF 0041	Title: Preventative Care and Screening: Influenza Immunization Description: Percentage of patients aged 6 months and older seen for a visit between October 1 and March 31 who received	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS, ACO, Group Reporting PQRS		Population/Public Health.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	an influenza immunization OR who reported previous receipt of an influenza immunization.				
NQF 0043	Title: Pneumonia Vaccination Status for Older Adults Description: Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS, NCQA-PCMH Recognition		Clinical Process/Effectiveness.
NQF 0052*	Title: Use of Imaging Studies for Low Back Pain Description: Percentage of patients 18-50 years of age with a diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of the diagnosis.	NCQA Contact Information: www.ncqa.org	EHR PQRS		Efficient Use of Healthcare Resources.
NQF 0055	Title: Diabetes: Eye Exam Description: Percentage of patients 18-75 years of age with diabetes who had a retinal or dilated eye exam by an eye care professional during the measurement period or a negative retinal exam (no evidence of retinopathy) in the 12 months prior to the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, Group Reporting PQRS		Clinical Process/Effectiveness.
NQF 0056	Title: Diabetes: Foot Exam Description: Percentage of patients aged 18-75 years of age with diabetes who had a foot exam during the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, Group Reporting PQRS		Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0059	Title: Diabetes: Hemoglobin A1c Poor Control Description: Percentage of patients 18-75 years of age with diabetes who had hemoglobin A1c >9.0% during the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS, UDS		Clinical Process/Effectiveness.
NQF 0060	Title: Hemoglobin A1c Test for Pediatric Patients Description: Percentage of patients 5-17 years of age with diabetes with an HbA1c test during the measurement period.	NCQA Contact Information: www.ncqa.org		New	Clinical Process/Effectiveness.
NQF 0062	Title: Diabetes: Urine Protein Screening Description: The percentage of patients 18-75 years of age with diabetes who had a nephropathy screening test or evidence of nephropathy during the measurement period.	NCQA Contact Information: www.ncqa.org	EHR PQRS, Group Reporting PQRS		Clinical Process/Effectiveness.
NQF 0064	Title: Diabetes: Low Density Lipoprotein (LDL) Management Description: Percentage of patients 18-75 years of age with diabetes whose LDL-C was adequately controlled (<100 mg/dL) during the measurement period.	NCQA Contact Information: www.ncqa.org	PQRS, Group Reporting PQRS		Clinical Process/Effectiveness.
NQF 0068	Title: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS		Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had documentation of use of aspirin or another antithrombotic during the measurement period.				
NQF 0069 **	Title: Appropriate Treatment for Children with Upper Respiratory Infection (URI) Description: Percentage of children 3 months-18 years of age who were diagnosed with upper respiratory infection (URI) and were not dispensed an antibiotic prescription on or three days after the episode.	NCQA Contact Information: www.ncqa.org	PQRS, NCQA-PCMH Recognition	New	Efficient Use of Healthcare Resources.
NQF 0070	Title: Coronary Artery Disease (CAD): Beta-Blocker Therapy—Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy.	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS, NCQA-PCMH Recognition		Clinical Process/Effectiveness.
NQF 0075	Title: Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft	NCQA Contact Information: www.ncqa.org	EHR PQRS, ACO, Group Reporting PQRS		Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	(CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had a complete lipid profile performed during the measurement period and whose LDL-C was adequately controlled (<100 mg/dL).				
NQF 0081	Title: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS, Group Reporting PQRS, NCQA-PCMH Recognition		Clinical Process/Effectiveness
	Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) <40% who were prescribed ACE inhibitor or ARB therapy either within a 12 month period when seen in the outpatient setting OR at each hospital discharge				
NQF 0083	Title: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS, ACO, Group Reporting PQRS		Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting OR at each hospital discharge.				
NQF 0086	Title: Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation Description: Percentage of patients aged 18 years and older with a diagnosis of POAG who have an optic nerve head evaluation during one or more office visits within 12 months.	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS		Clinical Process/Effectiveness.
NQF 0088	Title: Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months.	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS		Clinical Process/Effectiveness.
NQF 0089	Title: Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented	AMA-PCPI Contact Information: cpe@ama-assn.org	EHR PQRS		Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months.				
NQF 0101	Title: Falls: Screening for Future Fall Risk Description: Percentage of patients 65 years of age and older who were screened for future fall risk during the measurement period.	AMA-PCPI Contact Information: cpe@ama-assn.org; NCQA Contact Information: www.ncqa.org	PQRS, ACO, Group Reporting PQRS	New	Patient Safety.
NQF 0104	Title: Major Depressive Disorder (MDD): Suicide Risk Assessment Description: Percentage of patients aged 18 years and older with a new diagnosis or recurrent episode of MDD who had a suicide risk assessment completed at each visit during the measurement period.	AMA-PCPI Contact Information: cpe@ama-assn.org	PQRS	New	Clinical Process/Effectiveness.
NQF 0105	Title: Anti-depressant Medication Management Description: Percentage of patients 18 years of age and older who were diagnosed with major depression and treated with antidepressant medication, and who remained on antidepressant medication treatment. Two rates are reported.	NCQA Contact Information: www.ncqa.org	EHR PQRS, HEDIS, state use, ACA 2701		Clinical Process/Effectiveness.
	a. Percentage of patients who remained on an antidepressant medication for at least 84 days (12 weeks)				

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	b. Percentage of patients who remained on an antidepressant medication for at least 180 days (6 months)				
NQF 0108**	Title: ADHD: Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication Description: Percentage of children 6-12 years of age and newly dispensed a medication for attention-deficit/hyperactivity disorder (ADHD) who had appropriate follow-up care. Two rates are reported.	NCQA Contact Information: www.ncqa.org		New	Clinical Process/Effectiveness.
	a. Percentage of children who had one follow-up visit with a practitioner with prescribing authority during the 30-Day Initiation Phase				
	b. Percentage of children who remained on ADHD medication for at least 210 days and who, in addition to the visit in the Initiation Phase, had at least two additional follow-up visits with a practitioner within 270 days (9 months) after the Initiation Phase ended				
NQF 0110	Title: Bipolar Disorder and Major Depression: Appraisal for alcohol or chemical substance use Description: Percentage of patients with depression or bipolar disorder with evidence of an initial assessment that includes an appraisal	Center for Quality Assessment and Improvement in Mental Health (CQAIMH) Contact Information: www.cqaimh.org;	NCQA-PCMH Recognition	New	Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	for alcohol or chemical substance use.	cqaimh@cqaimh.org			
NQF 0384	Title: Oncology: Medical and Radiation—Pain Intensity Quantified Description: Percentage of patient visits, regardless of patient age, with a diagnosis of cancer currently receiving chemotherapy or radiation therapy in which pain intensity is quantified.	AMA-PCPI Contact Information: cpe@ama-assn.org	PQRS	New	Patient and Family Engagement.
NQF 0385	Title: Colon Cancer: Chemotherapy for AJCC Stage III Colon Cancer Patients Description: Percentage of patients aged 18 through 80 years with Stage III colon cancer who are referred for adjuvant chemotherapy, prescribed adjuvant chemotherapy, or have previously received adjuvant chemotherapy within the 12-month reporting period.	AMA-PCPI Contact Information: cpe@ama-assn.org; American Society of Clinical Oncology (ASCO): www.asco.org; National Comprehensive Cancer Network (NCCN): www.nccn.org	EHR PQRS		Clinical Process/Effectiveness.
NQF 0387	Title: Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer Description: Percentage of female patients aged 18 years and older with Stage IC through IIIC, ER or PR positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.	AMA-PCPI Contact Information: cpe@ama-assn.org; ASCO: www.asco.org; NCCN: www.nccn.org	EHR PQRS		Clinical Process/Effectiveness.
NQF	Title: Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer	AMA-PCPI Contact Information:	EHR PQRS		Efficient Use of Healthcare Resources.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
0389	Patients Description: Percentage of patients, regardless of age, with a diagnosis of prostate cancer at low risk of recurrence receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the prostate, OR radical prostatectomy, OR cryotherapy who did not have a bone scan performed at any time since diagnosis of prostate cancer.	cpe@ama-assn.org			
NQF 0403	Title: HIV/AIDS: Medical Visit Description: Percentage of patients, regardless of age, with a diagnosis of HIV/AIDS with at least two medical visits during the measurement year with a minimum of 60 days between each visit.	AMA-PCPI Contact Information: cpe@ama-assn.org; NCQA Contact Information: www.ncqa.org		New	Clinical Process/Effectiveness.
NQF 0405	Title: HIV/AIDS: Pneumocystis jiroveci pneumonia (PCP) Prophylaxis Description: Percentage of patients aged 6 weeks and older with a diagnosis of HIV/AIDS who were prescribed Pneumocystis jiroveci pneumonia (PCP) prophylaxis.	AMA-PCPI Contact Information: cpe@ama-assn.org; NCQA Contact Information: www.ncqa.org	PQRS, NCQA-PCMH Recognition	New	Clinical Process/Effectiveness.
TBD (proposed as NQF 0407)	Title: HIV/AIDS: RNA control for Patients with HIV Description: Percentage of patients aged 13 years and older with a diagnosis of HIV/AIDS, with at least two visits during the measurement year, with at least 60 days between each visit, whose most recent HIV RNA level is <200	NCQA Contact Information: www.ncqa.org	PQRS	New	Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	copies/mL.				
NQF 0418***	Title: Preventive Care and Screening: Screening for Clinical Depressionand Follow-Up Plan Description: Percentage of patients aged 12 years and older screened for clinical depression on the date of the encounter using an age appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the positive screen.	Centers for Medicare and Medicaid Services (CMS) 1-888-;734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; Quality Insights of Pennsylvania (QIP) Contact Information: www.usqualitymeasures.org	EHR PQRS, ACO, Group Reporting PQRS	New	Population/Public Health.
NQF 0419*	Title: Documentation of Current Medications in the Medical Record Description: Percentage of specified visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list must include ALL prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route of administration.	Centers for Medicare and Medicaid Services (CMS) 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; QIP Contact Information: www.usqualitymeasures.org	PQRS, EHR PQRS	New	Patient Safety.
NQF 0421*	Title: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Description: Percentage of patients aged 18 years and older with a calculated BMI in the past six months or during the current reporting period documented in the medical record AND if	Centers for Medicare and Medicaid Services (CMS) 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; QIP Contact Information:	EHR PQRS, ACO, Group Reporting PQRS, UDS		Population/Public Health.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	the most recent BMI is outside of normal parameters, a follow-up plan is documented within the past six months or during the current reporting period. Normal Parameters: Age 65 years and older BMI ≥23 and <30. Age 18-64 years BMI ≥18.5 and <25.	www.usqualitymeasures.org			
NQF 0564	Title: Cataracts: Complications within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures Description: Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and had any of a specified list of surgical procedures in the 30 days following cataract surgery which would indicate the occurrence of any of the following major complications: retained nuclear fragments, endophthalmitis, dislocated or wrong power IOL, retinal detachment, or wound dehiscence.	AMA-PCPI Contact Information: cpe@ama-assn.org; NCQA Contact Information: www.ncqa.org	PQRS	New	Patient Safety.
NQF 0565	Title: Cataracts: 20/40 or Better Visual Acuity within 90 Days Following Cataract Surgery Description: Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and no significant ocular conditions impacting the visual outcome of surgery and had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days	AMA-PCPI Contact Information: cpe@ama-assn.org; NCQA Contact Information: www.ncqa.org	PQRS	New	Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
	following the cataract surgery.				
NQF 0608	Title: Pregnant women that had HBsAg testing Description: This measure identifies pregnant women who had a HBsAg (hepatitis B) test during their pregnancy.	Ingenix Contact Information: www.ingenix.com		New	Clinical Process/Effectiveness.
NQF 0710	Title: Depression Remission at Twelve Months Description: Adult patients age 18 and older with major depression or dysthymia and an initial PHQ-9 score >9 who demonstrate remission at twelve months defined as PHQ-9 score less than 5. This measure applies to both patients with newly diagnosed and existing depression whose current PHQ-9 score indicates a need for treatment.	Minnesota Community Measurement (MNCM) Contact Information: www.mncm.org; info@mncm.org		New	Clinical Process/Effectiveness.
NQF 0712	Title: Depression Utilization of the PHQ-9 Tool Description: Adult patients age 18 and older with the diagnosis of major depression or dysthymia who have a PHQ-9 tool administered at least once during a 4 month period in which there was a qualifying visit.	MNCM Contact Information: www.mncm.org; info@mncm.org		New	Clinical Process/Effectiveness.
TBD **	Title: Children who have dental decay or cavities Description: Percentage of children ages 0-20, who have had tooth decay or cavities during the measurement period.	Maternal and Child Health Bureau, Health Resources and Services Administration http://mchb.hrsa.gov/		New	Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 1365	Title: Child and Adolescent Major Depressive Disorder: Suicide Risk Assessment Description: Percentage of patient visits for those patients aged 6 through 17 years with a diagnosis of major depressive disorder with an assessment for suicide risk.	AMA-PCPI Contact Information: cpe@ama-assn.org		New	Patient Safety.
NQF 1401	Title: Maternal depression screening Description: The percentage of children who turned 6 months of age during the measurement year, who had a face-to-face visit between the clinician and the child during child's first 6 months, and who had a maternal depression screening for the mother at least once between 0 and 6 months of life.	NCQA Contact Information: www.ncqa.org		New	Population/Public Health.
TBD	Title: Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists Description: Percentage of children, age 0-20 years, who received a fluoride varnish application during the measurement period.	University of Minnesota Contact Information: www.umn.edu		New	Clinical Process/Effectiveness.
TBD	Title: Preventive Care and Screening: Cholesterol—Fasting Low Density Lipoprotein (LDL-C) Test Performed Description: Percentage of patients aged 20 through 79 years whose risk factors have been assessed and a fasting LDL-C test has been performed.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; QIP Contact Information: www.usqualitymeasures.org	EHR PQRS	New	Clinical Process/Effectiveness.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
TBD	Title: Preventive Care and Screening: Risk-Stratified Cholesterol—Fasting Low Density Lipoprotein (LDL-C) Description: Percentage of patients aged 20 through 79 years who had a fasting LDL-C test performed and whose risk-stratified fasting LDL-C is at or below the recommended LDL-C goal.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; QIP Contact Information: www.usqualitymeasures.org	EHR PQRS	New	Clinical Process/Effectiveness.
TBD	Title: Dementia: Cognitive Assessment Description: Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period.	AMA-PCPI Contact Information: cpe@ama-assn.org	PQRS	New	Clinical Process/Effectiveness.
TBD	Title: Hypertension: Improvement in blood pressure Description: Percentage of patients aged 18-85 years of age with a diagnosis of hypertension whose blood pressure improved during the measurement period.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Clinical Process/Effectiveness.
TBD*	Title: Closing the referral loop: receipt of specialist report Description: Percentage of patients with referrals, regardless of age, for which the referring provider receives a report from the provider to whom the patient was referred.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Care Coordination.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
TBD	Title: Functional status assessment for knee replacement Description: Percentage of patients aged 18 years and older with primary total knee arthroplasty (TKA) who completed baseline and follow-up (patient-reported) functional status assessments.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Patient and Family Engagement.
TBD	Title: Functional status assessment for hip replacement Description: Percentage of patients aged 18 years and older with primary total hip arthroplasty (THA) who completed baseline and follow-up (patient-reported) functional status assessments.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Patient and Family Engagement.
TBD*	Title: Functional status assessment for complex chronic conditions Description: Percentage of patients aged 65 years and older with heart failure who completed initial and follow-up patient-reported functional status assessments.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Patient and Family Engagement.
TBD	Title: ADE Prevention and Monitoring: Warfarin Time in Therapeutic Range Description: Average percentage of time in which individuals with atrial fibrillation who are on chronic anticoagulation have International Normalized Ratio (INR) test results within the therapeutic range during the measurement period.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139		New	Patient Safety.

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
TBD	Title: Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented Description: Percentage of patients aged 18 years and older seen during the reporting period who were screened for high blood pressure AND a recommended follow-up plan is documented based on the current blood pressure (BP) reading as indicated.	CMS 1-888-734-6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; QIP Contact Information: www.usqualitymeasures.org	PQRS, EHR PQRS, Group Reporting PQRS, ACO	New	Population/Public Health.
* Recommended Adult Core CQMs for EPs.					
** Recommended Pediatric Core CQMs for EPs.					
*** PQRS = Physician Quality Reporting System.					
EHR PQRS = Physician Quality Reporting System's Electronic Health Record Reporting Option.					
CHIPRA = Children's Health Insurance Program Reauthorization Act.					
HEDIS = Healthcare Effectiveness Data and Information Set.					
ACA 2701 = Affordable Care Act section 2701.					
NCQA-PCMH = National Committee for Quality Assurance—Patient Centered Medical Home.					
Group Reporting PQRS = Physician Quality Reporting System's Group Reporting Option.					
UDS = Uniform Data System (Health Resources Services Administration).					
ACO = Accountable Care Organization (Medicare Shared Savings Program).					

Exhibit V.1 (Stage 1 Meaningful Use Criteria Regulations)

to the

Electronic Health Records System and Services Agreement

Federal Register

Wednesday,
July 28, 2010

Part II

Department of Health and Human Services

Centers for Medicare & Medicaid Services

42 CFR Parts 412, 413, 422 et al.
Medicare and Medicaid Programs; Electronic Health Record Incentive Program; Final Rule

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Parts 412, 413, 422, and 495

[CMS–0033–F]

RIN 0938–AP78

Medicare and Medicaid Programs; Electronic Health Record Incentive Program

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Final rule.

SUMMARY: This final rule implements the provisions of the American Recovery and Reinvestment Act of 2009 (ARRA) (Pub. L. 111–5) that provide incentive payments to eligible professionals (EPs), eligible hospitals and critical access hospitals (CAHs) participating in Medicare and Medicaid programs that adopt and successfully demonstrate meaningful use of certified electronic health record (EHR) technology. This final rule specifies—the initial criteria EPs, eligible hospitals, and CAHs must meet in order to qualify for an incentive payment; calculation of the incentive payment amounts; payment adjustments under Medicare for covered professional services and inpatient hospital services provided by EPs, eligible hospitals and CAHs failing to demonstrate meaningful use of certified EHR technology; and other program participation requirements. Also, the Office of the National Coordinator for Health Information Technology (ONC) will be issuing a closely related final rule that specifies the Secretary's adoption of an initial set of standards, implementation, specifications, and certification criteria for electronic health records. ONC has also issued a separate final rule on the establishment of certification programs for health information technology.

DATES: *Effective Date:* These regulations are effective on September 27, 2010.

FOR FURTHER INFORMATION CONTACT:
Elizabeth Holland, (410) 786–1309, EHR incentive program issues.
Edward Gendron, (410) 786–1064, Medicaid incentive payment issues.
Jim Hart, (410) 786–9520, Medicare fee for service payment issues.
Bob Kuhl or Susan Burris, (410) 786–5594, Medicare CAH payment and charity care issues.
Frank Szeflinski, (303) 844–7119, Medicare Advantage issues.

SUPPLEMENTARY INFORMATION:

Acronyms

ARRA American Recovery and Reinvestment Act of 2009
AAC Average Allowable Cost (of certified EHR technology)
AIU Adopt, Implement, Upgrade (certified EHR technology)
CAH Critical Access Hospital
CAHPS Consumer Assessment of Healthcare Providers and Systems
CCN CMS Certification Number
CFR Code of Federal Regulations
CHIP Children's Health Insurance Program
CHIPRA Children's Health Insurance Program Reauthorization Act of 2009
CMS Centers for Medicare & Medicaid Services
CPOE Computerized Physician Order Entry
CY Calendar Year
EHR Electronic Health Record
EP Eligible Professional
EPO Exclusive Provider Organization
FACA Federal Advisory Committee Act
FFP Federal Financial Participation
FFY Federal Fiscal Year
FFS Fee-For-Service
FQHC Federally Qualified Health Center
FTE Full-Time Equivalent
FY Fiscal Year
HEDIS Healthcare Effectiveness Data and Information Set
HHS Department of Health and Human Services
HIE Health Information Exchange
HIT Health Information Technology
HIPAA Health Insurance Portability and Accountability Act of 1996
HITECH Health Information Technology for Economic and Clinical Health Act
HMO Health Maintenance Organization
HOS Health Outcomes Survey
HPSA Health Professional Shortage Area
HRSA Health Resource and Services Administration
IAPD Implementation Advance Planning Document
ICR Information Collection Requirement
IHS Indian Health Service
IPA Independent Practice Association
IT Information Technology
MA Medicare Advantage
MAC Medicare Administrative Contractor
MAO Medicare Advantage Organization
MCO Managed Care Organization
MITA Medicaid Information Technology Architecture
MMIS Medicaid Management Information Systems
MSA Medical Savings Account
NAAC Net Average Allowable Cost (of certified EHR technology)
NCQA National Committee for Quality Assurance
NCVHS National Committee on Vital and Health Statistics
NPI National Provider Identifier
NPRM Notice of Proposed Rulemaking
ONC Office of the National Coordinator for Health Information Technology
PAHP Prepaid Ambulatory Health Plan
PAPD Planning Advance Planning Document
PFFS Private Fee-For-Service
PHO Physician Hospital Organization
PHS Public Health Service
PHSA Public Health Service Act
PIHP Prepaid Inpatient Health Plan
POS Place of Service
PPO Preferred Provider Organization
PQRI Physician Quality Reporting Initiative
PSO Provider Sponsored Organization
RHC Rural Health Clinic
RHQDAPU Reporting Hospital Quality Data for Annual Payment Update
RPPO Regional Preferred Provider Organization
SMHP State Medicaid Health Information Technology Plan
TIN Tax Identification Number

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I. Background

A. Overview of the HITECH Programs Created by the American Recovery and Reinvestment Act of 2009

The American Recovery and Reinvestment Act of 2009 (ARRA) (Pub. L. 111–5) was enacted on February 17,

2009. Title IV of Division B of ARRA amends Titles XVIII and XIX of the Social Security Act (the Act) by establishing incentive payments to eligible professionals (EPs), eligible hospitals, and critical access hospitals (CAHs), and Medicare Advantage Organizations to promote the adoption and meaningful use of interoperable health information technology (HIT) and qualified electronic health records (EHRs). These provisions, together with Title XIII of Division A of ARRA, may be cited as the "Health Information Technology for Economic and Clinical Health Act" or the "HITECH Act." These incentive payments are part of a broader effort under the HITECH Act to accelerate the adoption of HIT and utilization of qualified EHRs.

On January 13, 2010 we published a proposed rule (75 FR 1844), entitled "Medicare and Medicaid Programs; Electronic Health Record Incentive Program" to implement the provisions of ARRA that provide incentive payments to EPs, eligible hospitals, and CAHs participating in Medicare and Medicaid programs that adopt and successfully demonstrate meaningful use of "certified EHR technology," and incentive payments to certain Medicare Advantage Organizations for their affiliated EPs and eligible hospitals that meaningfully use certified EHR technology. Through this final rule, we are developing the incentive programs which are outlined in Division B, Title IV of the HITECH Act. This final rule sets forth the definition of "meaningful use of certified EHR technology."

Section 13101 of the HITECH Act adds a new section 3000 to the Public Health Service Act (PHSA), which defines "certified EHR technology" as a qualified EHR that has been properly certified as meeting standards adopted under section 3004 of the PHSA. CMS and ONC have been working closely to ensure that the definition of meaningful use of certified EHR technology and the standards for certified EHR technology are coordinated. In the interim final rule published on January 13, 2010 (75 FR 2014) entitled "Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology," ONC defined the term "certified EHR technology," identified the initial set of standards and implementation specifications that such EHR technology would need to support the achievement of the proposed meaningful use Stage 1, as well as the certification criteria that will be used to certify EHR technology. ONC is also issuing a final rule on the standards, implementation specifications, and certification criteria elsewhere in this issue of the **Federal Register**.

In a related proposed rule published on March 10, 2010, (75 FR 11328) entitled "Proposed Establishment of Certification Programs for Health Information Technology" ONC proposed the establishment of two certification programs for purpose of testing and certifying health information technology. In the June 24, 2010 **Federal Register** (75 FR 36157), ONC published a final rule to establish a temporary certification program whereby the National Coordinator would authorize organizations to test and certify complete EHRs and EHR Modules, and plans to issue a separate final rule to establish a permanent certification program to replace the temporary certification program. Specifically, this final rule will ensure that the definition of meaningful use of certified EHR technology does not require EPs, eligible hospitals, and CAHs to perform functions for which standards have not been recognized or established. Similarly, the functionality of certified EHR technology should enable and advance the definition of meaningful use.

We urge those interested in this final rule to also review the ONC interim final rule on standards and implementation specifications for certified EHR technology and the related final rule as well as the final rule on the establishment of a temporary certification program. Readers may also visit *http://healthit.hhs.gov* and *http://www.cms.hhs.gov/Recovery/11_HealthIT.asp#TopOfPage* for more information on the efforts at the Department of Health and Human Services (HHS) to advance HIT initiatives.

B. Statutory Basis for the Medicare & Medicaid EHR Incentive Programs

Section 4101(a) of the HITECH Act adds a new subsection (o) to section 1848 of the Act. Section 1848(o) of the Act establishes incentive payments for demonstration of meaningful use of certified EHR technology by EPs participating in the original Medicare program (hereinafter referred to as the Medicare Fee-for-Service (FFS) program) beginning in calendar year (CY) 2011. Section 4101(b) of the HITECH Act also adds a new paragraph (7) to section 1848(a) of the Act. Section 1848(a)(7) of the Act provides that beginning in CY 2015, EPs who do not demonstrate that they are meaningful users of certified EHR technology will receive an adjustment to their fee schedule for their professional services of 99 percent for 2015 (or, in the case of an eligible professional who was subject to the application of the payment adjustment under section 1848(a)(5) of the Act, 98 percent for 2014), 98 percent for 2016, and 97 percent for 2017 and each subsequent year. Section 4101(c) of the HITECH Act adds a new subsection (l) to section 1853 of the Act to provide incentive payments to certain Medicare Advantage (MA) organizations for their affiliated EPs who meaningfully use certified EHR technology and meet certain other requirements, and requires a downward adjustment to Medicare payments to certain MA organizations for professional services provided by any of their affiliated EPs who are not meaningful users of certified EHR technology, beginning in 2015. Section 1853(l) of the Act also requires us to establish a process that ensures that there are no duplicate payments made to MA organizations under section 1853(l) of the Act and to their affiliated EPs under the FFS EHR incentive program established under section 1848(o)(1)(A) of the Act.

Section 4102(a) of the HITECH Act adds a new subsection (n) to section 1886 of the Act. Section 1886(n) of the Act establishes incentives payments for demonstration of meaningful use of certified EHR technology by subsection (d) hospitals, as defined under section 1886(d)(1)(B) of the Act, participating in the Medicare FFS program beginning in Federal fiscal year (FFY) 2011. Section 4102(b)(1) of the HITECH Act amends section 1886(b)(3)(B) of the Act to provide that, beginning in FY 2015, subsection (d) hospitals that are not meaningful users of certified EHR technology will receive a reduced annual payment update for their inpatient hospital services. Section 4102(a)(2) of the HITECH Act amends section 1814(l) of the Act to provide an incentive payment to critical access hospitals (CAHs) who meaningfully use certified EHR technology based on the hospitals' reasonable costs for the purchase of certified EHR technology beginning in FY 2011. In addition, section 4102(b)(2) of the HITECH Act amends section 1814(l) of the Act to provide for a downward payment adjustment for hospital services provided by CAHs that are not meaningful users of certified EHR technology for cost reporting periods beginning in FY 2015. Section 4102(c) of the HITECH Act adds a new subsection (m) to section 1853 of the Act to provide incentive payments to qualifying MA organizations for certain affiliated hospitals that meaningfully

use certified EHR technology to make a downward adjustment to payments to certain MA organizations for inpatient hospital services provided by its affiliated hospitals that are not meaningful users of certified EHR technology beginning in FY 2015. Section 1853(m) of the Act also requires us to establish a process that ensures that there are no duplicate payments made to MA organizations under section 1853(m) of the Act and to their affiliated hospitals under the FFS EHR incentive program established under section 1886(n) of the Act.

Section 4103 of the HITECH Act provides for implementation funding for the EHR incentives program under Medicare.

Section 4201 of the HITECH Act amends section 1903 of the Act to provide 100 percent Federal financial participation (FFP) to States for incentive payments to certain eligible providers participating in the Medicaid program to purchase, implement, operate (including support services and training for staff) and meaningfully use certified EHR technology and 90 percent FFP for State administrative expenses related to the program outlined in 1903(t) of the Act. Section 4201(a)(2) of the HITECH Act adds a new subsection (t) to section 1903 of the Act to establish a program with input from the States to provide incentives for the adoption and subsequent meaningful use of certified EHR technology for providers participating in the Medicaid program.

II. Provisions of the Proposed Rule and Analysis of and Responses to Public Comments

We proposed to add a new part 495 to title 42 of the Code of Federal Regulations to implement the provisions of Title IV of Division B of ARRA providing for incentive payments to EPs, eligible hospitals, CAHs and certain Medicare Advantage organizations for the adoption and demonstration of meaningful use of certified EHR technology under the Medicare program or the Medicaid program.

The HITECH Act creates incentives under the Medicare Fee-for-Service (FFS), Medicare Advantage (MA), and Medicaid programs for EPs, eligible hospitals and CAHs to adopt and demonstrate meaningful use of certified EHR technology, and payment adjustments under the Medicare FFS and MA programs for EPs, eligible hospitals, and CAHs who fail to adopt and demonstrate meaningful use of certified EHR technology. The three incentive programs contain many common elements and certain provisions of the HITECH Act encourage avoiding duplication of payments, reporting, and other requirements, particularly in the area of demonstration of meaningful use of certified EHR technology. Eligible hospitals and CAHs may participate in both the Medicare program and the Medicaid program, assuming they meet each program's eligibility requirements, which vary across the two programs. In certain cases, the HITECH Act has used nearly identical or identical language in defining terms that are used in the Medicare FFS, MA, and Medicaid programs, including such terms as "hospital-based EPs" and "certified EHR technology." For these reasons, we seek to create as much commonality between the three programs as possible and have structured this final rule, as we did the proposed rule, based on the premise by beginning with those provisions that cut across the three programs before moving on to discuss the provisions specific to Medicare FFS, MA and Medicaid.

A. Definitions Across the Medicare FFS, MA, and Medicaid Programs

Title IV, Division B of ARRA establishes incentive payments under the Medicare and Medicaid programs for certain professionals and hospitals that meaningfully use certified EHR technology, and for certain MA organizations whose affiliated EPs and hospitals meaningfully use certified EHR technology. We refer to the incentive payments made under the original Medicare program to EPs, eligible hospitals, and CAHs as the Medicare FFS EHR incentive program, the incentive payments made to qualifying MA organizations as the MA EHR incentive program, and the incentive payments made under Medicaid to eligible professionals and eligible hospitals as the Medicaid EHR incentive program. When referring to the Medicare EHR incentive program, we are generally referring to both the Medicare FFS EHR and the MA EHR incentive programs.

1. Definitions

Sections 4101, 4102, and 4201 of the HITECH Act use many identical or similar terms. In this section of the preamble, we discuss terms for which we are finalizing uniform definitions for the Medicare FFS, MA, and Medicaid EHR incentive programs. These definitions are set forth in part 495 subpart A of the regulations. For definitions specific to an individual program, the definition is set forth and discussed in the applicable EHR incentive program section.

The incentive payments are available to EPs which are non-hospital-based physicians, as defined in section 1861(r) of the Act, who either receive reimbursement for services under the Medicare FFS program or have an employment or contractual relationship with a qualifying MA organization meeting the criteria under section 1853(l)(2) of the Act; or healthcare professionals meeting the definition of "eligible professional" under section 1903(t)(3)(B) of the Act as well as the patient-volume and non-hospital-based criteria of section 1903(t)(2)(A) of the Act and eligible hospitals which are subsection (d) hospitals as defined under subsection 1886(d)(1)(B) of the Act that either receive reimbursement for services under the Medicare FFS program or are affiliated with a qualifying MA organization as described in section 1853(m)(2) of the Act; critical access hospitals (CAHs); or acute care or children's hospitals described under section 1903(t)(2)(B) of the Act.

a. Certified Electronic Health Record (EHR) Technology

Under all three EHR incentive programs, EPs, eligible hospitals, and CAHs must utilize "certified EHR technology" if they are to be considered eligible for the incentive payments. In the Medicare FFS EHR incentive program this requirement for EPs is found in section 1848(o)(2)(A)(i) of the Act, and for eligible hospitals and CAHs in section 1886(n)(3)(A)(i) of the Act. In the MA EHR incentive program this requirement for EPs is found in section 1853(l)(1) of the Act, and for eligible hospitals and CAHs, in section 1853(m)(1) of the Act. In the Medicaid EHR incentive program this requirement for EPs and Medicaid eligible hospitals is found throughout section 1903(t) of the Act, including in section 1903(t)(6)(C) of the Act. Certified EHR technology is a critical component of the EHR incentive programs, and the Secretary has charged ONC, under the authority given to her in the HITECH Act, with developing the criteria and mechanisms for certification of EHR technology. Therefore, we finalize our proposal to use the definition of certified EHR technology adopted by ONC. ONC issued an interim final rule with comment for the standards and certification criteria for certified EHR technology at the same time our proposed rule was issued. After reviewing the comments they received and to address changes made in this final rule, ONC will be issuing a final rule in conjunction with this final rule. When we refer to the ONC final rule, we are referring to this final rule titled

"Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology. When we refer to the ONC IFR, we are referring to the interim final rule with comment period published in the **Federal Register** on January 13, 2010.

Comment: Several commenters asked for clarification on the definition of certified EHR technology. Currently, hospitals utilize multiple systems to operate electronically. For example, some electronic operating systems feed EHR data and some systems pull EHR data. Data from the two systems are then extracted and manipulated to create a quality measure calculation. The commenters' inquired as to how these systems can continue to be utilized even though, independently, these systems will not meet all certification standards. Some commenters expressed concern the ONC IFR did not include generation of the data needed to demonstrate meaningful use as a certification requirement and that certified EHR technology requirements should also include compliance with HIPAA standards as well as all relevant state statutes for the state or states where it is installed. Commenters recommended various approaches to defining certified technology especially in the early stages of the program. Some suggestions included, grandfathering existing systems for a period of three years as long as the provider could meet specific meaningful use objectives while requiring all upgrades to existing systems to be certified, allowing all EHR products certified by the Certification Commission for Health Information Technology (CCHIT) at the criteria established for 2008 or later be deemed as meeting Stage 1 certification requirements or alternatively CMS provide a process that can verify compliance of required features at no cost to providers or vendors as is done now with Enterprise Data Interchange (EDI) claims processing. Some commenters also offered other thoughts on potential unintended consequences of defining the EHR certification software process to include certifying agencies that charge for the process. The commenters believed this could result in continued new and revised requirements to justify the certifying entities' existence and increase its revenue.

Response: We have referred those comments to ONC who addresses them in their final rule.

We are adopting the ONC definition of certified EHR technology at 45 CFR 170.102 in this final rule.

b. Qualified Electronic Health Record

In order for an EHR technology to be eligible for certification, it must first meet the definition of a Qualified Electronic Health Record. This term was defined by ONC in its in its IFR and finalized by ONC in their final rule, and we are finalizing our proposal to use the definition of qualified electronic health record adopted by ONC in their final rule to be published concurrently with this rule.

Comment: We received a few comments on the definition of qualified EHR technology. Commenters expressed concerns regarding perceived gaps in defining an EHR as qualified such as a lack of the requirement for a narrative text for physicians (also known as progress note). Another comment requested further clarification regarding the requirement for a qualified EHR to "capture and query information relevant to health care quality" and "exchange electronic health information with and integrate such information from other sources." For example, some might believe that these requirements apply strictly to information contained within the EHR or closed proprietary hospital systems and not to information that would have to be obtained from outside the four walls of the practice or the extended (but closed) system.

Response: We have referred those comments to ONC who addresses them in their final rule.

We are adopting the ONC definition of Qualified Electronic Health Record at 45 CFR 170.102.

c. Payment Year

As discussed in the proposed rule, under section 1848(o)(1)(A)(i) of the Act the Medicare FFS EHR incentive payment is available to EPs for a "payment year." Section 1848(o)(1)(E) of the Act defines the term "payment year" as a year beginning with 2011. While the Act does not use the term, "payment year," for the Medicaid EHR incentive program, it does use the term "year of payment" throughout section 1903(t) of the Act, for example, at sections 1903(t)(3)(C), 1903(t)(4)(A), and 1903(t)(6)(C) of the Act. For all EPs in the Medicare and Medicaid EHR incentive programs, we are proposing a common definition for both "payment year" and "year of payment," as "any calendar year beginning with 2011" at § 495.4. In the proposed rule, we explained that this definition, which is consistent with the statutory definition of "payment year" under Medicare FFS, would simplify the EHR incentive programs for EPs. As discussed later in this preamble, EPs will have the opportunity to participate in either the Medicare or Medicaid incentive programs, and once an EP has selected a program, they are permitted to make a one-time switch from one program to the other. A common definition will allow EPs to more easily understand both incentive programs, and inform their decisions regarding participation in either program.

Under section 1886(n)(1) of the Act, the Medicare FFS EHR incentive payment is available to eligible hospitals and CAHs for a "payment year." Section 1886(n)(2)(G) of the Act defines the term "payment year" as a fiscal year beginning in 2011. As hospitals are paid based on the 12-month Federal fiscal year, we interpret the reference to a "fiscal year" means the fiscal year beginning on October 1 of the prior calendar year and extending to September 30 of the relevant year. Again, for the Medicaid EHR incentive program, the HITECH Act uses the term, "year of payment" (see section 1903(t)(5)(D)(ii) of the Act), rather than "payment year." For the same reasons expressed in the proposed rule and summarized above for proposing a common definition of "payment year" for EPs, and because hospitals will have the opportunity to simultaneously participate in both the Medicare and Medicaid EHR incentive programs, we propose a common definition of "payment year" and "year of payment" for both programs.

For purposes of the incentive payments made to eligible hospitals and CAHs under the Medicare FFS, MA and Medicaid EHR incentive programs, we proposed to define payment year and year of payment at § 495.4, consistent with the statutory definition, as "any fiscal year beginning with 2011."

Comment: A commenter asked CMS to identify the first possible payment year for EPs, and hospitals and CAHs.

Response: The first payment year for EPs is any calendar year (CY) beginning with CY 2011 and for eligible hospitals and CAHs is any fiscal year (FY) beginning with 2011.

Comment: The majority of commenters favored our definition of "payment year" based on the different existing fiscal periods for eligible professionals and hospitals. Additional support was received from some commenters whom explained that they participated in performance-based initiatives, which define a payment year the same as the proposed rule.

Response: After consideration of the public comments received, we are adopting our proposed definition of "payment year" in the Medicare and

Medicaid EHR incentive programs as described above.

Comment: The majority of comments received regarding the definition of a payment year asked whether payment years must be consecutive for an EP or eligible hospital to receive all years of incentive payments.

Response: In the proposed rule, we defined the second, third, fourth, fifth, and sixth payment year, respectively, to mean "the second, third, fourth, fifth, and sixth calendar or Federal fiscal year, respectively, for which an EP or eligible hospital receives an incentive payment." However, section 1848(o)(1)(E) of Act defines the second through fifth payment years for an EP as each successive year immediately following the first payment year for such professional for the Medicare FFS and MA EHR incentive programs. Similarly, section 1886(n)(2)(G)(ii) of the Act defines the second through fourth payment years for an eligible hospital or CAH as requiring the years to be "successive" and "immediately following" the prior year. This requirement, that each payment year "immediately follow" the prior year, means that every year subsequent to the first payment year is a payment year regardless of whether an incentive payment is received by the EP, eligible hospital or CAH. For example, if a Medicare EP receives an incentive in CY 2011, but does not successfully demonstrate meaningful use or otherwise fails to qualify for the incentive in CY 2012, CY 2012 still counts as one of the EP's five payment years and they would only be able to receive an incentive under the Medicare EHR incentive program for three more years as CY 2013 would be there third payment year. In this example, the maximum incentive payment that would apply for this Medicare EP not practicing predominately in a health professional shortage area (HPSA) would be $18,000 in 2011, and $8,000 in 2013 as outlined in section 1848(o)(1)(B) of the Act. The EP would have qualified for a maximum incentive payment of $12,000 in 2012, but did not qualify as a meaningful user for this year. No incentives may be made under the Medicare EHR incentive program after 2016.

The same rule, however, does not apply to the Medicaid EHR incentive program. For that program, payments may generally be non-consecutive. If an EP or eligible hospital does not receive an incentive payment for a given CY or FY then that year would not constitute a payment year. For example, if a Medicaid EP receives incentives in CY 2011 and CY 2012, but fails to qualify for an incentive in CY 2013, they would still be eligible to receive incentives for an additional four payment years. For hospitals, however, starting with FY 2017 payments must be consecutive. This rule is required by section 1903(t)(5)(D) of the Act, which states that after 2016, no Medicaid incentive payment may be made to an eligible hospital unless "the provider has been provided payment * * * for the previous year." As a result, Medicaid eligible hospitals must receive an incentive in FY 2016 to receive an incentive in FY 2017 and later years. Starting in FY 2016, incentive payments must be made every year in order to continue participation in the program. In no case may any Medicaid EP or eligible hospital receive an incentive after 2021. We have revised our regulations at § 495.4 to incorporate these statutory requirements.

Comment: Some commenters requested that CMS clarify the impact on EPs when they change practices in the middle of the incentive payment program; in other words, if an EP leaves a practice in year two of the incentive payment program and goes to another practice, does that EP forfeit the ability to continue collecting incentive payments for years 3 through 5?

Response: A qualifying EP that leaves one practice for another may still be eligible to receive subsequent incentive payments if the EP is a meaningful EHR user in the new practice. The incentive payment is tied to the individual EP, and not to his or her place of practice.

d. First, Second, Third, Fourth, Fifth, and Sixth Payment Year

In accordance with sections 1848(o)(1)(A)(ii), 1886(n)(2)(E), 1814(l)(3)(A), 1903(t)(4)(B), and 1903(t)(5)(A) of the Act, for EPs, eligible hospitals, and CAHs that qualify for EHR incentive payments in a payment year, the amount of the payment will depend in part on whether the EP or hospital previously received an incentive payment and, if so (for the Medicare EHR incentive program) when the EP or hospital received his or her first payment. We proposed to define the first payment year to mean the first CY or Federal fiscal year (FY) for which an EP, eligible hospital, or CAH receives an incentive payment. Likewise, we proposed to define the second, third, fourth, fifth, and sixth payment year, respectively, to mean the second, third, fourth, fifth, and sixth CY or FY, respectively, for which an EP, eligible hospital, or CAH receives an incentive payment.

Comment: As stated above, many commenters requested clarification on non-consecutive payment.

Response: This comment is addressed above.

Comment: A commenter requested CMS to clarify the consequences for a hospital that originally qualified and received incentive payments the first year, but in a subsequent year failed to qualify as a meaningful user of certified EHR technology.

Response: Meaningful use will be assessed on a year-by-year basis as we establish different Stages of meaningful use criteria for different years. If an EP or an eligible hospital including a CAH has failed to demonstrate meaningful use of certified EHR technology for a certain payment year, the EP, eligible hospital, or CAH will not be qualified for incentive payments for that payment year. However, upon successful demonstration as a meaningful EHR user in subsequent years, an EP, eligible hospital or CAH may be eligible to receive an incentive payment. As discussed above, however, for the Medicare program, the failure of the eligible hospital or CAH to demonstrate meaningful use in the subsequent year, will affect the total payments that hospital is eligible to receive, as, pursuant to the statute, the hospital is treated as skipping a payment year. Payment adjustments apply to Medicare providers who are unable to demonstrate meaningful use starting in 2015.

Comment: One commenter asked if CMS could apply the same Medicaid EP's first year incentive eligibility requirements of adopting, implementing or upgrading to certified EHR technology to Medicare physicians instead of demonstration of meaningful use.

Response: The HITECH Act allows Medicaid EPs and eligible hospitals to receive an incentive for the adoption, implementation, or upgrade of certified EHR technology in their first participation year. In subsequent years, these EPs and eligible hospitals must demonstrate that they are meaningful users. There are no parallel provisions under the Medicare EHR incentive program that would authorize us to make payments to Medicare EPs, eligible hospitals, and CAHs for the adoption, implementation or upgrade of certified EHR technology. Rather, in accordance with sections 1848(o)(2), 1886(n)(3)(A), and 1814(l)(3)(A) of the Act, Medicare incentive payments are only made to EPs, eligible hospitals, and CAHs for the demonstration of meaningful use of certified EHR technology.

After consideration of the public comments received, we are finalizing the definitions of First payment year as proposed. For the Medicare EHR incentive programs, we are modifying the definitions of second, third, fourth, fifth payment year to make clear that these years are "each successive year following the first payment year." For the Medicaid EHR incentive program, we included definitions of first, second, third, fourth, fifth and sixth payment year that make clear that these are the years for which payment is received. The regulations can now be found at § 495.4 of our regulations.

e. EHR Reporting Period

In the proposed rule, we proposed a definition of EHR Reporting Period for purposes of the Medicare and Medicaid incentive payments under sections 1848(o), 1853(l)(3), 1886(n), 1853(m)(3), 1814(l) and 1903(t) of the Act. For these sections, we proposed that the EHR reporting period would be any continuous 90-day period within the first payment year and the entire payment year for all subsequent payment years. In our proposed rule, we did not make any proposals regarding the reporting period that will be used for purposes of the payment adjustments that begin in 2015. We intend to address this issue in future rulemaking, for purposes of Medicare incentive payment adjustments under sections 1848(a)(7), 1853(l)(4), 1886(b)(3)(B)(ix), 1853(m)(4), and 1814(l)(4) of the Act.

For the first payment year only, we proposed to define the term EHR reporting period at § 495.4 of our regulations to mean any continuous 90-day period within a payment year in which an EP, eligible hospital or CAH successfully demonstrates meaningful use of certified EHR technology. The EHR reporting period therefore could be any continuous period beginning and ending within the relevant payment year. Starting with the second payment year and any subsequent payment years for a given EP, eligible hospital or CAH, we proposed to define the term EHR reporting period at § 495.4 to mean the entire payment year. In our discussion of considerations in defining meaningful use later in this section we discuss how this policy may be affected by subsequent revisions to the definition of meaningful use.

For the first payment year, we stated in the proposed rule our belief that giving EPs, eligible hospitals and CAHs flexibility as to the start date of the EHR reporting period is important, as unforeseen circumstances, such as delays in implementation, higher than expected training needs and other unexpected hindrances, may cause an EP, eligible hospital, or CAH to potentially miss a target start date.

Comment: Some commenters supported the 90-day reporting period proposed for the first payment year. One commenter requested that exceptions, per the provider request, be considered individually in cases of compliance for less than the 90 days (for example, 85 days). Commenters preferred the 90-day reporting period overall and many suggested it be used for subsequent years as well. We also received comments questioning why Medicaid providers would need to conform to the 90-day reporting period in order to adopt, implement or upgrade certified EHR technology.

Response: We do believe that for program integrity it is crucial to maintain a consistent reporting period. Basing the incentive payments on meaningful use implies a minimum level of use in order to receive the incentive payment. The timeframe is part of the determination of whether use is meaningful and therefore requires a minimum as well. Given the short time period as compared to the entire year, we do not believe an exception process is needed. However, we agree with commenters that an EHR reporting period for demonstrating adoption, implementation or upgrading certified EHR technology by Medicaid EPs and eligible hospitals is unnecessary and are removing it for the final rule in this instance. Similarly, Medicaid EPs and eligible hospitals who are demonstrating meaningful use for the first time in their second payment year, will have a 90-day reporting period to maintain parity with Medicare providers' first meaningful use payment year. We do not believe that after successfully demonstrating meaningful use, a 90-day period is appropriate for subsequent years. The reasons for using the 90-day period instead of the full year are based on potential delays in implementing certifying EHR technology. Once certified EHR technology is implemented these are no longer applicable.

After consideration of the public comments received and with the clarification described above for adopting, implementing or upgrading, we are finalizing the 90-day reporting period for the first payment year based on meaningful use as proposed for Medicare EPs, eligible hospitals and CAHs and full year EHR reporting periods for subsequent payment years. For Medicaid EPs and eligible hospitals, the EHR reporting period will be a 90-day period for the first year a Medicaid EP or eligible hospital demonstrates meaningful use and full year EHR reporting periods for subsequent payment years.

f. Meaningful EHR User

Section 1848(o)(1)(A)(i) of the Act, limits incentive payments under the Medicare FFS EHR incentive program to an EP who is a "meaningful EHR user." Similarly, section 1886(n)(1) and 1814(l) of the Act, limits incentive payments under the Medicare FFS EHR incentive program to an eligible hospital or CAH, respectively, who is a "meaningful EHR user." Section 1903(t)(6)(C)(i)(II) of the Act limits incentive payments for payment years other than the first payment year to a Medicaid EP or eligible hospital who "demonstrates meaningful use of certified EHR technology." We proposed to define at § 495.4 the term "meaningful EHR user" as an EP, eligible hospital, or CAH who, for an EHR reporting period for a payment year, demonstrates meaningful use of certified EHR technology in the form and manner consistent with our standards (discussed below).

Comment: Several commenters indicated there is a need to align measures and programs, to avoid having to report similar measure standards to different Federal, State and other entities.

Response: We concur with the goal of alignment to avoid redundant and duplicative reporting and seek to accomplish this to the extent possible now and in future rulemaking.

Comment: Several commenters suggested that CMS considers EPs, eligible hospitals, and CAHs who are participating in certain existing programs as meaningful EHR users. The commenters contended that the standards followed by participants in these programs are equivalent to those we proposed to adopt for purposes of demonstrating meaningful use. The programs recommended by commenters are—

- Qualified Health Information Exchange Networks; and
- Medicare Electronic Health Record Demonstration Program.

Response: We do not agree that participation in these programs would be the equivalent to demonstrating meaningful use in accordance with the criteria under the EHR incentive programs. Most of these programs place a heavy focus on one of the five priorities of meaningful use discussed in the next section such as reporting clinical quality measures or the exchange of health information, tailored to the individual program's goals. For example, the goal of the Medicare

Electronic Health Record Demonstration Program, for example, which was started in 2009 and pre-dates passage of the HITECH Act, is to reward delivery of high-quality care supported by the adoption and use of electronic health records in physician small to medium-size primary care practices. The purpose of this program is to encourage adoption and increasingly sophisticated use of EHRs by small to medium-sized primary care practices. While this goal is similar to the overall objective of the HITECH Act, the requirements for the demonstration are not as broad-based as that of the HITECH Act, and payment incentives are based on the level of use over the duration of the program, which will vary by practice. Therefore, it is not appropriate to deem practices participating in the EHR Demonstration as meaningful users for purposes of the HITECH Act. The HITECH Act also requires use certified EHR technology as defined by ONC to qualify for incentive payments. While CCHIT has certified EHR technology in the past, the ONC regulation "Establishment of the Temporary Certification Program for Health Information Technology; Final Rule" (see 75 FR 36157) which establishes a temporary certifying body has yet to be established. Where possible, we have aligned the criteria required to demonstrate meaningful use with existing programs like PQRI and RHQDAPU as discussed in section II.A.3 of this final rule. After consideration of the public comments received, we are finalizing our definition of a meaningful EHR user as proposed.

2. Definition of Meaningful Use

a. Considerations in Defining Meaningful Use

In sections 1848(o)(2)(A) and 1886(n)(3)(A) of the Act, the Congress identified the broad goal of expanding the use of EHRs through the term meaningful use. In section 1903(t)(6)(C) of the Act, Congress applies the definition of meaningful use to Medicaid eligible professionals and eligible hospitals as well. Certified EHR technology used in a meaningful way is one piece of a broader HIT infrastructure needed to reform the health care system and improve health care quality, efficiency, and patient safety. HHS believes this ultimate vision of reforming the health care system and improving health care quality, efficiency and patient safety should drive the definition of meaningful use consistent with the applicable provisions of Medicare and Medicaid law.

In the proposed rule we explained that in defining meaningful use we sought to balance the sometimes competing considerations of improving health care quality, encouraging widespread EHR adoption, promoting innovation, and avoiding imposing excessive or unnecessary burdens on health care providers, while at the same time recognizing the short timeframe available under the HITECH Act for providers to begin using certified EHR technology.

Based on public and stakeholder input received prior to publishing the proposed rule, we consider a phased approach to be most appropriate. Such a phased approach encompasses reasonable criteria for meaningful use based on currently available technology capabilities and provider practice experience, and builds up to a more robust definition of meaningful use, based on anticipated technology and capabilities development. The HITECH Act acknowledges the need for this balance by granting the Secretary the discretion to require more stringent measures of meaningful use over time. Ultimately, consistent with other provisions of law, meaningful use of certified EHR technology should result in health care that is patient centered, evidence-based, prevention-oriented, efficient, and equitable.

Under this phased approach to meaningful use, we intend to update the criteria of meaningful use through future rulemaking. We refer to the initial meaningful use criteria as "Stage 1." We currently anticipate two additional updates, which we refer to as Stage 2 and Stage 3, respectively. We expect to update the meaningful use criteria on a biennial basis, with the Stage 2 criteria by the end of 2011 and the Stage 3 criteria by the end of 2013. The stages represent an initial graduated approach to arriving at the ultimate goal.

- *Stage 1:* The Stage 1 meaningful use criteria, consistent with other provisions of Medicare and Medicaid law, focuses on electronically capturing health information in a structured format; using that information to track key clinical conditions and communicating that information for care coordination purposes (whether that information is structured or unstructured, but in structured format whenever feasible); implementing clinical decision support tools to facilitate disease and medication management; using EHRs to engage patients and families and reporting clinical quality measures and public health information. Stage 1 focuses heavily on establishing the functionalities in certified EHR technology that will allow for continuous quality improvement and ease of information exchange. By having these functionalities in certified EHR technology at the onset of the program and requiring that the EP, eligible hospital or CAH become familiar with them through the varying levels of engagement required by Stage 1, we believe we will create a strong foundation to build on in later years. Though some functionalities are optional in Stage 1, as outlined in discussions later in this rule, all of the functionalities are considered crucial to maximize the value to the health care system provided by certified EHR technology. We encourage all EPs, eligible hospitals and CAHs to be proactive in implementing all of the functionalities of Stage 1 in order to prepare for later stages of meaningful use, particularly functionalities that improve patient care, the efficiency of the health care system and public and population health. The specific criteria for Stage 1 of meaningful use are discussed at section II.2.c of this final rule.
- *Stage 2:* Our goals for the Stage 2 meaningful use criteria, consistent with other provisions of Medicare and Medicaid law, expand upon the Stage 1 criteria to encourage the use of health IT for continuous quality improvement at the point of care and the exchange of information in the most structured format possible, such as the electronic transmission of orders entered using computerized provider order entry (CPOE) and the electronic transmission of diagnostic test results (such as blood tests, microbiology, urinalysis, pathology tests, radiology, cardiac imaging, nuclear medicine tests, pulmonary function tests, genetic tests, genomic tests and other such data needed to diagnose and treat disease). For the final rule, we elaborate on our plans for Stage 2. We expect that stage two meaningful use requirements will include rigorous expectations for health information exchange, including more demanding requirements for e-prescribing and incorporating structured laboratory results and the expectation that providers will electronically transmit patient care summaries to support transitions in care across unaffiliated providers, settings and EHR systems. Increasingly robust expectations for health information exchange in stage two and stage three will support and make real the goal that information follows the patient. We expect that Stage 2 will build upon Stage 1 by both altering the expectations of the functionalities in Stage 1 and likely adding new functionalities which

are not yet ready for inclusion in Stage 1, but whose provision is necessary to maximize the potential of EHR technology. As discussed later in this final rule, we are making some objectives of the Stage 1 of meaningful use optional and other required. We will consider every objective that is optional for Stage 1 to be required in Stage 2 as well as revaluate the thresholds and exclusions of all the measures both percentage based and those currently a yes/no attestation. Additionally, we may consider applying the criteria more broadly to all outpatient hospital settings (not just the emergency department).

• *Stage 3:* Our goals for the Stage 3 meaningful use criteria are, consistent with other provisions of Medicare and Medicaid law, to focus on promoting improvements in quality, safety and efficiency leading to improved health outcomes, focusing on decision support for national high priority conditions, patient access to self management tools, access to comprehensive patient data through robust, patient-centered health information exchange and improving population health.

We did not include regulatory provisions for Stage 2 or Stage 3 in our proposal and with one exception discussed under the CPOE objective, we are not finalizing Stage 2 or Stage 3 requirements at this time. However, we plan to build upon Stage 1 by increasing the expectations of the functionalities in Stage 1 and adding new objectives for Stage 2. In our next rulemaking, we currently intend to propose that every objective in the menu set for Stage 1 (as described later in this section) be included in Stage 2 as part of the core set. While allowing providers flexibility in setting priorities for EHR implementation takes into account their unique circumstances, we maintain that all the objectives are crucial to building a strong foundation for health IT and to meeting the statutory objectives of the Act. In addition, as indicated in our proposed rule, we anticipate raising the threshold for these objectives in both Stage 2 and 3 as the capabilities of HIT infrastructure increases. For Stage 2, we intend to review the thresholds and measures associated with all Stage 1 objectives considering advances in technology, changes in standard practice, and changes in the marketplace (for example, wider adoption of information technology by pharmacies) and propose, as appropriate, increases in these requirements.

We recognize that the thresholds included in the final regulation are ambitious for the current state of technology and standards of care. However, we expect the delivery of health care to evolve through the inception of the HITECH incentive programs and implementation of the Affordable Care Act prior to finalizing Stage 2. Furthermore, data collected from the initial attestations of meaningful use will be used to ensure that the thresholds of the measures that accompany the objectives in Stage 2 are continue to aggressively advance the use of certified EHR technology. Finally, we continue to anticipate redefining our objectives to include not only the capturing of data in electronic format but also the exchange (both transmission and receipt) of that data in increasingly structured formats. As appropriate, we intend to propose the addition of new objectives to capture new functions that are necessary to maximize the potential of EHR technology, but were not ready for Stage 1. For instance, we would consider adding measures related to CPOE orders for services beyond medication orders. The intent and policy goal for raising these thresholds and expectations is to ensure that meaningful use encourages patient-centric, interoperable health information exchange across provider organizations.

We will continue to evaluate the progression of the meaningful use definition for consistency with the HITECH ACT and any future statutory requirements relating to quality measurement and administrative simplification. As the purpose of these incentives is to encourage the adoption and meaningful use of certified EHR technology, we believe it is desirable to account for whether an EP, eligible hospital or CAH is in their first, second, third, fourth, fifth, or sixth payment year when deciding which definition of meaningful use to apply in the beginning years of the program. The HIT Policy Committee in its public meeting on July 16, 2009 also voiced its approval of this approach. However, such considerations are dependent on future rulemaking, so for this final rule Stage 1 criteria for meaningful use are valid for all payments years until updated by future rulemaking.

We proposed that Medicare EPs, eligible hospitals, and CAHs whose first payment year is 2011 must satisfy the requirements of the Stage 1 criteria of meaningful use in their first and second payment years (2011 and 2012) to receive the incentive payments. We anticipate updating the criteria of meaningful use to Stage 2 in time for the 2013 payment year and therefore anticipate for their third and fourth payment years (2013 and 2014), an EP, eligible hospital, or CAH whose first payment year is 2011 would have to satisfy the Stage 2 criteria of meaningful use to receive the incentive payments. We proposed that Medicare EPs, eligible hospitals, and CAHs whose first payment year is 2012 must satisfy the Stage 1 criteria of meaningful use in their first and second payment years (2012 and 2013) to receive the incentive payments. We anticipate updating the criteria of meaningful use to Stage 2 in time for the 2013 payment year and anticipate for their third payment year (2014), an EP, eligible hospital, or CAH whose first payment year is 2012 would have to satisfy the Stage 2 criteria of meaningful use to receive the incentive payments. We discussed in the proposed rule that Medicare EPs, eligible hospitals, and CAHs whose first payment year is 2013 must satisfy the Stage 1 criteria of meaningful use in their first payment year (2013) to receive the incentive payments. We anticipate updating the criteria of meaningful use to Stage 2 in time for the 2013 payment year and therefore anticipate for their second payment year (2014), an EP, eligible hospital, or CAH whose first payment year is 2013 would have to satisfy the Stage 2 criteria of meaningful use to receive the incentive payments. We discussed in the proposed rule that Medicare EPs, eligible hospitals, and CAHs whose first payment year is 2014 must satisfy the Stage 1 criteria of meaningful use in their first payment year (2014) to receive the incentive payments. In the proposed rule, we discussed the idea that alignment of stage of meaningful use and payment year should synchronize for all providers in 2015, and requested comment on the need to create such alignment. After reviewing public comment on this issue, our goal remains to align the stages of meaningful use across all providers in 2015. However, we acknowledge the concerns regarding the different Medicare and Medicaid incentive timelines, as well as concerns about whether Stage 3 would be appropriate for an EP's, eligible hospital's or CAH's first payment year at any point in the future and believe the issue needs additional review and discussion before we lay out a clear path forward for 2015 and beyond. Therefore, we have decided to remove language in the final rule discussing our possible directions for any year beyond 2014. We will address the years beyond 2014 in later rulemaking. Table 1 outlines how we anticipate applying the respective criteria of meaningful use in the first years of the program, and how we anticipate applying such criteria for

subsequent payment years, through 2014. Please note that nothing in this discussion restricts us from requiring additional stages of meaningful use (beyond stage 3) through future rulemaking. In addition, as we expect to engage in rulemaking to adopt the criteria that will accompany Stages 2 and 3 of meaningful use, stakeholders should wait for those rulemakings to determine what will be required for those Stages and should not view the discussions in this preamble or final rule as binding the agency to any specific definition for those future stages.

TABLE 1: Stage of Meaningful Use Criteria by Payment Year

First Payment Year	Payment Year				
	2011	2012	2013	2014	2015
2011	Stage 1	Stage 1	Stage 2	Stage 2	TBD
2012		Stage 1	Stage 1	Stage 2	TBD
2013			Stage 1	Stage 1	TBD
2014				Stage 1	TBD

Please note that each of the EHR incentive programs has different rules regarding the number of payment years available, the last year for which incentives may be received, and the last payment year that can be the first payment year for an EP, eligible hospital, or CAH. The applicable payment years and the incentive payments available for each program are also discussed in section II.C. of this final rule for the Medicare FFS EHR incentive program, in section II.D. of this final rule for the MA EHR incentive program, and in section II.E. of this final rule for the Medicaid EHR incentive program.

Comment: Numerous commenters noted that it is inappropriate to align the Medicaid EHR incentive payment program with the Medicare program due to the lack of penalties in the Medicaid program and due to the option for Medicaid providers to participate in their first year by adopting, implementing, or upgrading certified EHR technology.

Response: This was not the only reason for having all EPs, eligible hospitals, and CAHs align by 2015. However, as we are not addressing stages of meaningful use beyond 2014 in this final rule, potential alignment is not discussed. We will reconsider this comment in future rulemaking.

The stages of criteria of meaningful use and how they are demonstrated are described further in this final rule and will be updated in subsequent rulemaking to reflect advances in HIT products and infrastructure. We note that such future rulemaking might also include updates to the Stage 1 criteria.

We invited comment on our alignment between payment year and the criteria of meaningful use particularly in regards to the need to create alignment across all EPs, eligible hospitals, and CAHs in all EHR incentive programs in 2015.

Comment: Many commenters requested that if there continued to be a year where all EPs, eligible hospitals and CAHs must meet the same stage of meaningful use that that year be 2017, rather than 2015 as we had discussed in the proposed rule. These commenters asserted that EPs, eligible hospitals, and CAHs whose first payment year is after 2011 might not have sufficient time to reach the Stage 3 of meaningful use criteria by 2015. Some commenters pointed out that while the HITECH Act states that 2015 is the first year of payment adjustments, it provides for escalation of the payment adjustments so that they do not reach their full levels until 2017.

Response: As we explained in the proposed rule, equity in the level of meaningful use across all EPs, eligible hospitals, and CAHs subject to the payment adjustment was not the only reason for our plan that all EPs, eligible hospitals, and CAHs satisfy the Stage 3 criteria for either the Medicare or Medicaid EHR incentive programs. The achievement of many of the ultimate goals of meaningful use of certified EHR technology are dependent on a critical mass of EPs, eligible hospitals, and CAHs all being meaningful EHR users. Exchange of health information is most valuable when it is so robust that it can be relied upon to provide a complete or nearly complete picture of a patient's health. For example, robust Stage 3 meaningful use by an EP does not assist that EP in avoiding ordering a duplicative test, if the EP with information on the original test is only a Stage 1 meaningful EHR user and is not yet exchanging that information. This dependency is key to the need to get to Stage 3 for all providers. Another reason for alignment at Stage 3 in 2015 is that many of the barriers to functionalities of EHRs that exist today as may no longer exist in 2015. The existence of these barriers today is one of the primary reasons for having a staged approach as opposed to requiring more robust meaningful use at the beginning of the program. Providers, developers of EHRs, government and non-governmental organizations are all working to remove these barriers. We believe it is likely there will be success in removing many of these barriers, which would make many of the compromises made in Stage 1 no longer necessary by 2015. However, due to the many comments on alignment starting in 2015 and our plan to engage in additional more rounds of rulemaking, we are removing discussion of actual alignment between the first payment year of an EP, eligible hospital, or CAH and the Stage of meaningful use they will be expected to meet for all years after 2014. Our policies for 2015 and subsequent years will be determined through future rulemaking.

Comment: Several commenters requested that CMS base the payment adjustments on Stage 1 of meaningful use regardless of the EP, eligible hospital, or CAH's prior participation in the incentive program.

Response: We thank commenters for the thoughtful comments received, and will take their input into consideration when in future rulemaking when we consider whether to require that EPs, eligible hospitals, and CAHs satisfy the stage 3 definition of meaningful use in order to avoid reduced payments under Medicare for their professional services and inpatient hospital services beginning 2015. We reiterate, however, that in this final rule we are only adopting criteria that we expect will

apply in 2011 and 2012. We have also outlined the expected progression of stages of meaningful use criteria until 2014. However, we are not in this rule finalizing regulations that address the meaningful use standards that apply in 2015 and thereafter.

Comment: Numerous commenters requested that we specifically propose objectives and measures for Stage 2 and 3. We also received recommendations on what those objectives and, in rare cases, measures should be. We discussed some of these objectives in the proposed rule and discuss them again in this final rule in section II.d. Others are highly related to existing objectives, while still others were not discussed in any way in the proposed rule. The suggested objectives and measures for Stages 2 and 3 include the following:

- Use of evidence-based order sets.
- Electronic medication administration record (eMAR).
- Bedside medication administration support (barcode/RFID).
- Record nursing assessment in EHR.
- Record nursing plan of care in EHR.
- Record physician assessment in EHR.
- Record physician notes in EHR.
- Multimedia/Imaging integration.
- Generate permissible discharge prescriptions electronically.
- Contribute data to a PHR.
- Record patient preferences (language, etc).
- Provide electronic access to patient-specific educational resources.
- Asking patients about their experience of care.

Response: With one exception discussed under the CPOE objective, we continue to believe that finalizing specific objectives and measures for later stages is inappropriate. One of the greatest benefits of the phased stage approach is the ability to consider the impact and lessons of the prior stage when formulating a new stage. Many commenters supported our discussion of later stages for this very reason. In addition, we do not believe it is appropriate to finalize objectives for any stage of meaningful use that were not specifically discussed in the proposed rule, as doing so would deprive the public the opportunity to comment on the objective in question. Nevertheless, we thank commenters for the thoughtful comments received, and expect to take their input into consideration when in future rulemaking we consider additional or revised criteria and measures to adopt for the stage 2 and stage 3 definitions of meaningful use.

Comment: A commenter indicated that attestation is an insufficient means to hold providers accountable for the expenditure of public funds and to protect against fraud and abuse.

Response: We likewise are concerned with the potential fraud and abuse. However, Congress for the HITECH Act specifically authorized submission of information as to meaningful use through attestation. CMS is developing an audit strategy to ameliorate and address the risk of fraud and abuse.

b. Common Definition of Meaningful Use Under Medicare and Medicaid

Under sections 1848(o)(1)(A)(i), 1814(l)(3)(A), and 1886(n)(1) of the Act, an EP, eligible hospital or CAH must be a meaningful EHR user for the relevant EHR reporting period in order to qualify for the incentive payment for a payment year in the Medicare FFS EHR incentive program. Sections 1848(o)(2)(A) and 1886(n)(3)(A) of the Act provide that an EP and an eligible hospital shall be considered a meaningful EHR user for an EHR reporting period for a payment year if they meet the following three requirements: (1) Demonstrates use of certified EHR technology in a meaningful manner; (2) demonstrates to the satisfaction of the Secretary that certified EHR technology is connected in a manner that provides for the electronic exchange of health information to improve the quality of health care such as promoting care coordination, in accordance with all laws and standards applicable to the exchange of information; and (3) using its certified EHR technology, submits to the Secretary, in a form and manner specified by the Secretary, information on clinical quality measures and other measures specified by the Secretary. The HITECH Act requires that to receive a Medicaid incentive payment in the initial year of payment, an EP or eligible hospital may demonstrate that they have engaged in efforts to "adopt, implement, or upgrade certified EHR technology." Details, including special timeframes, on how we define and implement "adopt, implement, and upgrade" are in section II.D.7.b.2 of this final rule. For subsequent payment years, or the first payment year if an EP or eligible hospital chooses, section 1903(t)(6)(C)(i)(II) of the Act, prohibits receipt of an incentive payment, unless "the Medicaid provider demonstrates meaningful use of certified EHR technology through a means that is approved by the State and acceptable to the Secretary, and that may be based upon the methodologies applied under section 1848(o) or 1886(n)." (Sections 1848(o) and 1886(n) of the Act refer to the Medicare EHR incentive programs for EPs and eligible hospitals/CAHs respectively.) Under section 1903(t)(8) of the Act to the maximum extent practicable, we are directed to avoid duplicative requirements from Federal and State governments to demonstrate meaningful use of certified EHR technology. Provisions included at section 1848(o)(1)(D)(iii) of the Act also contain a Congressional mandate to avoid duplicative requirements for meaningful use, to the extent practicable. Finally, section 1903(t)(8) of the Act allows the Secretary to deem satisfaction of the requirements for meaningful use of certified EHR technology for a payment year under Medicare to qualify as meaningful use under Medicaid.

We stated in the proposed rule that we believe that given the strong level of interaction on meaningful use encouraged by the HITECH Act, there would need to be a compelling reason to create separate definitions for Medicare and Medicaid. We declared in the proposed rule that we had found no such reasons for disparate definitions in our internal or external discussions. To the contrary, stakeholders have expressed strong preferences to link the Medicare and Medicaid EHR incentive programs wherever possible. Hospitals are entitled to participate in both programs, and we proposed to offer EPs an opportunity to switch between the Medicare and Medicaid EHR incentive programs. Therefore, we proposed to create a common definition of meaningful use that would serve as the definition for EPs, eligible hospitals and CAHs participating in the Medicare FFS and MA EHR incentive program, and the minimum standard for EPs and eligible hospitals participating in the Medicaid EHR incentive program. We clarified that under Medicaid this proposed common definition would be the minimum standard. We proposed to allow States to add additional objectives to the definition of meaningful use or modify how the existing objectives are measured; the Secretary would not accept any State alternative that does not further promote the use of EHRs and healthcare quality or that would require additional functionality beyond that of certified EHR technology. See section II.D.8. of this final rule for further details.

For hospitals, we proposed to exercise the option granted under section 1903(t)(8) of the Act and deem any Medicare eligible hospital or CAH who is a meaningful EHR user under the Medicare EHR incentive program and is otherwise eligible for the Medicaid incentive payment to be classified as a meaningful EHR user under the Medicaid EHR incentive program. This

is applicable only to eligible hospitals and CAHs, as EPs cannot simultaneously receive an incentive payment under both Medicare and Medicaid.

We solicited comments as to whether there are compelling reasons to give the States additional flexibility in creating disparate definitions beyond what was proposed. In addition, if commenting in favor of such disparate definitions, we also asked interested parties to comment on whether the proposal of deeming meeting the Medicare definition as sufficient for meeting the Medicaid definition remains appropriate under the disparate definitions. This is applicable only to hospitals eligible for both the Medicare and Medicaid incentive programs. Furthermore, if a State has CMS-approved additional meaningful use requirements, hospitals deemed as meaningful users by Medicare would not have to meet the State-specific additional meaningful use requirements in order to qualify for the Medicaid incentive payment.

Comment: Most commenters believe that States should not be allowed the option to add to or change the meaningful use requirements for the Medicaid EHR incentive program. The commenters' main reason for standardizing the meaningful use requirements for both Medicare and Medicaid is to eliminate administrative burden on both providers and EHR vendors to accommodate programming and reporting using different technical specifications for the same or similar measures.

Response: After consideration of the comments received, we are finalizing the provisions regarding possible differences in the definition of meaningful use between Medicare and Medicaid with the following revisions. We believe that over time the option to add to or change the floor definition of meaningful use might represent an important policy tool for States and therefore CMS plans to review and adjudicate these requests over the duration of the program. For Stage 1 of meaningful use, we have revised the definition of meaningful use in response to the many comments and are requiring an overall lower bar and an approach that is more flexible. On the other hand, we wish to support the ability for States to reinforce their public health priorities and goals based upon their existing public health infrastructure and maturity. For that reason, we, for Stage 1, will only entertain States' requests to tailor the Stage 1 meaningful use definition as it pertains specifically to public health objectives and data registries. For purposes of the Medicaid EHR incentive program during Stage 1 of meaningful use, these are limited to:

Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

Measure: Generate at least one report listing patients of the EP or eligible hospital with a specific condition.

Example: Generate lists of patients with the following conditions: depression, diabetes, obesity, etc. This would not be for reporting to the State but to draw EPs' or eligible hospitals' attention in order to better manage their patient population. States would also be permitted to request CMS approval to include this in the core set for all EPs and/or eligible hospitals.

Objective: Capability to submit electronic data to immunization registries of Immunization Information Systems and actual submission in accordance with applicable law and practice.

Measure: Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP or eligible hospital submits such information have the capacity to received the information electronically).

Example: State could point to a specific immunization registry that supports standards-based transmission of data and dictate how that information is transmitted. States would also be permitted to request CMS approval to include this objective in the core list for all EPs and eligible hospitals. The justification for this request in their State Medicaid HIT Plan, should address any potential barriers for providers in achieving this objective.

Objective: Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice.

Measure: Performed at least one test of certified EHR technology's capacity to submit electronic data on reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible hospital submits such information have the capacity to receive the information electronically).

Example: State could specify the standards-based means of transmission and/or the destination of this data. States would also be permitted to request CMS approval to include this objective in the core list for all and eligible hospitals. The justification for this request in their State Medicaid HIT Plan, should address any potential barriers for providers in achieving this objective.

Objective: Capability to submit electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.

Measure: Performed at least one test of certified EHR technology's capacity to submit electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP or eligible hospital submits such information have the capacity to receive the information electronically).

Example: State could specify the standards-based means of transmission and/or the destination of this data. States would also be permitted to request CMS approval to include this objective in the core list for all EPs and eligible hospitals. The justification for this request in their State Medicaid HIT Plan, should address any potential barriers for providers in achieving this objective.

We reiterate that we will not approve any requests that would require EHR functionality above and beyond that included in the ONC EHR certification criteria as finalized for Stage 1 of meaningful use.

Comment: Several commenters requested that CMS affirm the ability of States to require additional meaningful use criteria for all eligible professionals and hospitals (pursuant to §§ 495.316(a), 495.316(d)(2)), regardless of whether those entities were deemed eligible through Medicare.

Response: Section 1903(t)(8) provides authority for the Secretary to "deem satisfaction of requirements for * * * meaningful use for a payment year under title XVIII to be sufficient to qualify as meaningful use under [1903(t)]." We continue to believe that allowing deeming ensures that hospitals eligible for both programs are able to focus on only one set of measures, without requiring duplication of effort or confusion regarding meaningful use standards. Thus, hospitals eligible for both Medicare and Medicaid incentive payments will be deemed for Medicaid if they have met the meaningful use definition through Medicare, even if a State has an approved State-specific definition of meaningful use. States cannot withhold a Medicaid EHR incentive payment from dually eligible hospitals if they have met all the eligibility criteria for Medicaid, and have met the Medicare definition for meaningful use.

Because of this comment, we are revising section § 495.4 of our regulations to indicate that eligible hospitals who are meaningful users under the Medicare EHR incentive payment program are deemed as meaningful users under the Medicaid EHR incentive payment program, and need not meet additional criteria imposed by the State. While this is not a new requirement, it was not previously listed in regulations.

Comment: A commenter asked that CMS adopt and affirm the deeming approach in its final rule and ensure that the regulatory language reflects this approach.

Response: We agree and have included in the final rule regulation language that hospitals that are meaningful users under the Medicare EHR Incentive Program are deemed meaningful users under the Medicaid EHR Program.

Comment: Several commenters requested that CMS not deem hospitals having met the meaningful use requirements for the Medicare EHR Incentive Payment, as having fulfilled the meaningful use requirements for the State's Medicaid EHR Incentive Payment. The commenters noted that if a State sought for acute care hospitals to participate in their statewide health information exchange and yet those hospitals did not have to do so in order to qualify for both the Medicare and Medicaid EHR Incentive Payments, then they would have no motivation to do so. The commenters would like acute care hospitals eligible for both the Medicare and Medicaid EHR Incentive Program to have to comply with any State-specific meaningful use requirements, in addition to the Medicare floor definition.

Response: In consideration of the comments received, CMS adopts its proposed preamble language about deeming hospitals and adds the corresponding regulation text. This is necessary for Stage 1 of meaningful use in particular, where we believe it is crucial to prevent additional burden on providers and foster eligible hospitals' path to successful EHR adoption and meaningful use. In addition, as already noted, for Stage 1, we will not entertain States' requests to alter the floor definition of meaningful use as codified in this final rule except for specific public health objectives. That thereby reduces the possible differences between the Medicare and Medicaid definitions of meaningful use. As part of Stage 2 of meaningful use, CMS might consider States requests to tailor meaningful use as it pertains to health information exchange, for example. Further details about this policy option will be included in future rulemaking and subject to public comment.

c. Stage 1 Criteria for Meaningful Use

In the proposed rule we proposed that to qualify as a meaningful EHR user for 2011, EPs, eligible hospitals or CAHs must demonstrate that they meet all of the objectives and their associated measures as set forth in proposed § 495.6. We further proposed and finalize in this final rule that except where otherwise indicated, each objective and its associated measure must be satisfied by an individual EP as determined by unique National Provider Identifiers (NPIs) and an individual hospital as determined by unique CMS certification numbers (CCN).

Discussion of Whether an EP, Eligible Hospital or CAH Must Meet All Stage 1 Meaningful Use Objectives and Their Associated Measures

Comment: Commenters almost unanimously said that requiring an EP, eligible hospital or CAH to meet all of the objectives and their associated measures in order to qualify as a meaningful EHR user was too ambitious given the current state of EHR technology, adoption levels, the timeline for certification of EHR technologies, the realities of implementing EHR technology and the timeline proposed for Stage 1 of meaningful use in our proposed rule.

Most of the commenters suggested alternatives that they believed would support the health care policy priorities of Stage 1. Several different alternatives were proposed. The first alternative would be to require a specified percentage of the Stage 1 meaningful use objectives and associated measures, with an EP, eligible hospital or CAH free to select which of the objectives and associated measures it would satisfy. For example under our proposed objectives and associated measures, if an EP were required to meet 20 percent, then an EP would be considered a meaningful EHR user if he or she satisfied any five of the proposed twenty–five objectives and associated measures. Most commenters suggesting this alternative envisioned that later stages of meaningful use would require that EPs, eligible hospitals, and CAHs satisfy a higher of the percentage of the objectives and associated measures. For example if 20 percent of the objectives and associated measures were required for Stage 1, then 50 percent might be required in Stage 2.

After a fixed percentage, the suggestion next favored by commenters, including the HIT Policy Committee and MedPAC, was to divide the meaningful use objectives into two categories, a "core set" of objectives and "menu set" of objectives. To be a considered a meaningful user under this approach, an EP, eligible hospital, or CAH would be required to satisfy (1) all core set of objectives, and (2) a specified percentage of the menu set of objectives, with the EP, eligible hospital, or CAH free to select which of the menu set of objectives it would satisfy. For example, if five objectives were in the core set all EPs, eligible hospitals, and CAHs would have to meet those objectives. If twenty objectives were in the menu set, then EPs, eligible hospitals, and CAHs would not have to meet one or more of those objectives. Commenters varied widely as to which objectives should be included in the core set of objectives, as well as the percentage of menu set objectives an EP, eligible hospital, or CAH must satisfy.

Some commenters suggested that we simply reduce the number of objectives required for Stage 1 of meaningful use. Recommendations in this regard varied from reducing the required objectives to only just a few (the lowest number being three), limiting the required objectives to only to those objectives that affect health outcomes of individual patients, to targeted elimination of a few objectives.

Finally, some commenters suggested that we eliminate all of the measures associated with the Stage 1 meaningful use objectives and only require that EPs, eligible hospitals, and CAHs attest that they have attempted to meet each of the objectives.

Response: After reviewing the comments, we agree that requiring that EPs, eligible hospitals, and CAHs satisfy all of the objectives and their associated measures in order to be considered a meaningful EHR user would impose too great a burden and would result in an unacceptably low number of EPs, eligible hospitals, and CAHs being able to qualify as meaningful EHR users in the first two years of the program. In considering an alternative approach, we have sought to develop an alternative that is responsive to some degree to all the concerns raised by the commenters. We have tried to reduce the requirements both in number required and in the thresholds of the associated measures and provide some flexibility as well. At the same time, however, we must be mindful of the relevant statutory requirements. Sections 1848 (o)(2)(A) and 1886(n)(3) of the Act, specify three requirements for meaningful use: (1) Use of certified EHR technology in a meaningful manner (for example, electronic prescribing); (2) that

the certified EHR technology is connected in a manner that provides for the electronic exchange of health information to improve the quality of care; and (3) that, in using certified EHR technology, the provider submits to the Secretary information on clinical quality measures and such other measures selected by the Secretary. We believe that each EP, eligible hospital, and CAH must meet at least one objective within each of the three requirements for meaningful use. We are concerned that if we were to give EPs, eligible hospitals, and CAHs full discretion to select which meaningful use objectives they will satisfy, some providers would not choose one or more objectives within each of the three statutory requirements for meaningful use. Furthermore, we are concerned that affording EPs, eligible hospitals, and CAHs such flexibility as to which meaningful use objectives to meet would delay many of the goals outlined for meaningful use in section II.a.2. of this final rule. If in choosing what objectives to defer, one provider chooses to focus on improving processes to improve healthcare quality, another chooses to focus on being able to exchange health information and yet another on engaging patients and families it is possible that we would fail to accomplish any of these goals at a population level. For these reasons, we do not believe it would be appropriate to afford providers the unlimited flexibility to select which of the meaningful use objectives they will meet. Rather, as explained below, we believe providers at a minimum should have to satisfy a core set of objectives in order to qualify as meaningful EHR users.

Similarly, while we agree that merely reducing the number of objectives would make meaningful use easier to achieve for most providers, we believe that this reduction does not afford the same flexibility to all providers to account for their individual difficulties in meeting meaningful use that some of the other alternatives do as allowing a provider to choose certain objectives to defer. Due to any number of circumstances such as EHR adoption level, availability of health information exchange network, size of practice or hospital, etc., an objective that is easy for one EP to achieve might be very difficult for another EP. Under this alternative, no allowance is made for those differences. Finally, we disagree that meaningful use should be limited to improving the health outcomes of individual patients. There are significant gains that meaningful use can achieve in the areas of public health, privacy and security, engagement of patients and their families and efficiency of care that may not improve health outcomes, but have significant other benefits such as engaging patients more fully in decisions affecting their health and reducing costs through increased efficiency of care. We believe that all of these have a significant impact on health outcome priorities. Therefore, we do not categorically reduce the number of objectives for Stage 1 definition of meaningful use. We consider requests to defer an objective to later stages of the meaningful use criteria or eliminate a specific objective below in our discussion of each objective.

Comment: Another alternative that was recommended by a significant number of commenters was that we base the incentive payment amount on the number of stage 1 meaningful use objectives satisfied by an EP or eligible hospital, with those satisfying more objectives eligible for a higher incentive payment amount. While some commenters varied in the specifics or did not provide specifics, generally we take this to mean that if an EP, eligible hospital, or CAH met half of the objectives then they would receive half of the incentive payment they would have received had they met all the objectives.

Response: The HITECH Act does not give us the authority to award partial payments. As discussed elsewhere in this final rule, sections 1848(o)(1)(A) of the Act specifies the payment incentive amount to which an EP who is a meaningful EHR user is entitled. Similarly, section 1886(n)(2) of the Act sets forth a formula for calculation of incentive payment amount to which an eligible hospital that is a meaningful EHR user is entitled. Similarly, section 1814(l)(3)(A) of the Act sets forth a formula for calculation of incentive payment amount to which an eligible hospital that is a meaningful EHR user is entitled. Similarly, section 1903(t)(4)(B) of the Act sets parameters for determining the Medicaid EHR incentive for Medicaid EP. None of these parameters are related to meaningful use. Similarly, section 1903(t)(5)(A) of the Act sets forth a formula for calculation of the incentive payment amount to which a Medicaid eligible hospital is entitled. As we do not have the authority to alter these statutory formulas for calculating the incentive payment amounts under Medicare and Medicaid, we cannot pro rate the incentive payment amount based on the number of meaningful use objectives satisfied by an EP, eligible hospital, or CAH.

After consideration of the public comments received, we are establishing a core set of objectives with associated measures and a menu set of objectives with associated measures. In order to qualify as a meaningful EHR user, an EP, eligible hospital, or CAH must successfully meet the measure for each objective in the core set and all but five of the objectives in the menu set. With one limitation, an EP, eligible hospital, or CAH may select any five objectives from the menu set to be removed from consideration for the determination of qualifying as a meaningful EHR user. Further discussion of the objectives, including additional details about their inclusion in the core set, can be found at each objective.

We believe that establishing both a core and a menu set adds flexibility and allows the minimum statutory set to be met. In determining the objectives to include in the core set, we looked at all comments, especially those of the HIT Policy Committee and other commenters who recommended some required and optional elements. The HITECH Act requires the use of health information technology in improving the quality of health care, reducing medical errors, reducing health disparities, increasing prevention and improving the continuity of care among health care settings. In defining the core set of meaningful use objective, we believe the most crucial aspect to consider is meeting the three statutory guidelines provided in the HITECH Act and discussed in section II.A.2.a of this final rule. Second is to identify those objectives that are most crucial to laying the foundation for obtaining value from meaningful use of certified EHR technology. Third, we believe that meaningful use should be patient-centered so we focus on getting the most value to the patient. We believe the recommendation of the HIT Policy Committee accomplishes third criteria, but falls short of the first and second. To accomplish the first criteria, we add the objective of submitting clinical quality measures to CMS or the States and the objective of exchanging key clinical information among providers of care and patient authorized entities. To accomplish the second, we add several additional objectives to the core set of measures as critical elements pertinent to the management of patients. We have received a number of comments in support of these particular measures as critical to the management of patients (maintaining an up-to-date problem list, active medication list, active allergy list, smoking history and incorporate clinical

lab tests into EHR as structured data) in comparison to other requirements. The addition of two other functional objectives (drug-drug and drug-allergy features) as core measures are for improved patient-safety. All of the listed elements are integral to the initial or on-going management of a patient's current or future healthcare. While each element is important in the management of patients in and of itself, the aggregate of the elements elevates the importance of clinical information to not only the primary provider but for all members of the interdisciplinary team involved in the patient's care. The HITECH Act statutorily requires the use of health information technology in improving the quality of health care, reducing medical errors, reducing health disparities, increasing prevention, and improving the continuity of care among health care settings. These core set of measures are also foundational and aligned with each other. For example, electronic copies of health information given to patient will be useless if it does not contain basic information such as a problem list, medication list or allergy list. Exchange of information to other members of the health care team across settings will depend on having structured data of these elements. Therefore, in support of the HITECH Act in meeting the statutory requirements, we have expanded the core set of measures to include these fundamental elements to improve patient care. Below we list the objectives included in the core set of meaningful use objectives.

—Use CPOE
—Implement drug to drug and drug allergy interaction checks
—E-Prescribing (EP only)
—Record demographics
—Maintain an up-to-date problem list
—Maintain active medication list
—Maintain active medication allergy list
—Record and chart changes in vital signs
—Record smoking status
—Implement one clinical decision support rule
—Report CQM as specified by the Secretary
—Electronically exchange key clinical information
—Provide patients with an electronic copy of their health information
—Provide patients with an electronic copy of their discharge instructions (Eligible Hospital/CAH Only)
—Provide clinical summaries for patients for each office visit (EP Only)
—Protect electronic health information created or maintained by certified EHR

In addition, achieving Stage 1 meaningful use means demonstration of progress in each of the five healthcare outcome priorities outlined in the proposed rule and discussed again later in this section. Only one of these priorities is not represented in the core set, population and public health. As we have discussed in this section we do not want any priority to be overlooked due to the flexibility we have added to Stage 1 of meaningful use; therefore, all EPs and hospitals must choose at least one of the population and public health measures to demonstrate as part of the menu set. This is the only limitation placed on which five objectives can be deferred from the menu set.

Discussion on Whether Certain EP, Eligible Hospital or CAH Can Meet all Stage 1 Meaningful Use Objectives Given Established Scopes of Practice

In the proposed rule, we specifically encouraged comments on whether certain providers may have difficulty meeting one or more of the objectives due to their provider type or chosen specialties

Comment: We received many comments, both general and specific, that certain providers or specialists may not be able to comply with certain objectives because they are beyond the scope of their licensing authority or because they are outside the scope of their standard of practice. For example, chiropractors do not have prescribing authority and thus may not make use of an EHR technology's e-prescribing function and rheumatologists may not require information on vital signs. While comments on this potential non-applicability primarily focused on EPs, we did receive comments that some objectives may not be relevant to smaller or specialized eligible hospitals as well.

Response: We believe the division of the meaningful use objectives into a core set and a menu set may minimize the impact of including among the meaningful use objectives one or more objectives that certain providers or specialists may be unable to satisfy as the EP, eligible hospital, or CAH can defer five objectives from the menu set. However, if the EP, eligible hospital or CAH has an insurmountable barrier to meeting an objective in the core set or a significant number in the menu set then the problem remains. For example, without any consideration on an EP, eligible hospital or CAH's capability to meet the measure associated with a core objective any EP that could not order medications requiring a prescription would not be able to become a meaningful EHR user as e-prescribing is a core set objective. Similarly, any eligible hospital or CAH that did not have any requests for electronic copy of discharge instructions would not be able to become a meaningful EHR user. In addition, if this were to occur for a significant number of menu set objectives, the flexibility for the EP, eligible hospital, or CAH to use the five objectives to account for other concerns such as implementation struggles or workflow process redesign would be curtailed. To account for this possibility, we have modified each objective and measure to indicate when there is an option for an EP, eligible hospital, or CAH to report that the objective/measure is inapplicable to them, because they have no patients or no or insufficient number of actions that would allow calculation of the meaningful use measure. This will allow an EP, eligible hospital, or CAH to qualify as a meaningful EHR user without being required to meet objectives we have specified as potentially inapplicable. We note that the exclusions to meaningful use objectives/measures are specific to each objective/measure. In our discussion of each specific objective/measure (which occurs later in this preamble), we have identified specific exclusions where they exist. Providers wishing to claim that an objective/measure is inapplicable to them would need to meet the criteria of such an exception.

After consideration of the public comments received, we have identified, for each meaningful use objective, whether the EP, eligible hospital, or CAH may attest that they did not have any patients or insufficient actions on which to base a measurement of a meaningful use for the EHR reporting period. For objectives in the core set, such an attestation would remove the objective from consideration when determining whether an EP, eligible hospital, or CAH is a meaningful EHR user. In other words, the EP, eligible hospital, or CAH could satisfy the core set objectives by satisfying all remaining objectives included in the core set. For objectives in the menu set, such an attestation would also remove the objective from consideration when determining whether an EP, eligible hospital, or CAH is a meaningful EHR user. For example, if for one objective included in the menu set an EP attests that he or she did not have any patients or insufficient actions during the EHR reporting period on which to base a measurement of a meaningful use objective, rather than satisfy 5 of the 10 meaningful use objectives included in the menu set for EPs, the EP need only

satisfy 4 of the 9 remaining meaningful use objectives included in the menu set for EPs

EPs Practicing in Multiple Practices

Another situation where flexibility may be needed in order for an EP to become a meaningful EHR user is the situation where an EP may provide care in multiple practices or multiple locations. We proposed a policy to account for EPs practicing in multiple practices and settings. We discussed in the proposed rule that we believe it is unlikely for an EP to use one record keeping system for one patient population and another system for another patient population at one location. We are concerned about the application of the measures associated with the meaningful use objectives for EPs who see patients in multiple practices or multiple locations. If an EP does not have certified EHR technology available at each location/practice where they see patients it could become impossible for the EP to successfully become a meaningful EHR user based on the measures associated with the meaningful use objectives. We do not seek to exclude EPs who meaningfully use certified EHR technology when it is available because they also provide care in another practice where certified EHR technology is not available. Therefore, we proposed that all measures be limited to actions taken at practices/locations equipped with certified EHR technology. A practice is equipped if certified EHR technology is available at the beginning of the EHR reporting period for a given geographic location. Equipped does not mean the certified EHR technology is functioning on any given day during the EHR reporting period. Allowances for downtime and other technical issues with certified EHR technology are made on an objective-by-objective basis as discussed later in this section. We are concerned that seeing a patient without certified EHR technology available does not advance the health care policy priorities of the definition of meaningful use. We are also concerned about possible inequality of different EPs receiving the same incentive, but using certified EHR technology for different proportions of their patient population. We believe that an EP would have the greatest control of whether certified EHR technology is available in the practice in which they see the greatest proportion of their patients. We proposed that to be a meaningful EHR user an EP must have 50 percent or more of their patient encounters during the EHR reporting period at a practice/location or practices/locations equipped with certified EHR technology. An EP for who does not conduct 50 percent of their patient encounters in any one practice/location would have to meet the 50 percent threshold through a combination of practices/locations equipped with certified EHR technology. For example, if the EP practices at both a Federally Qualified Health Center (FQHC) and within his or her individual practice, we would include in our review both of these locations and certified EHR technology would have to be available at the location where the EP has at least 50 percent of their patient encounters.

Comment: Some commenters recommended that 50 percent or more of the patient encounters must occur at the practice location that receives the incentive payment.

Response: As discussed in section II.A.4 of this final rule, an EP may assign their incentive payment to other practices. We do not believe that limiting practices and EPs to only considering the location that receives an incentive payment provides advantages to the program. The requirement suggested by commenters would potentially cause some EPs not to meet the 50 percent threshold even if through a combination of practices they may use certified EHR technology for far more than 50 percent of their patient encounters.

Comment: Some commenters requested clarification of our proposed statement "Therefore, we proposed that all measures be limited to actions taken at practices/locations equipped with certified EHR technology"

Response: We mean this statement to be that as long as an EP has certified EHR technology available for 50 percent or more of their patient encounters during the EHR reporting period they only have to include those encounters where certified EHR technology is available at the start of the EHR reporting period. We discuss the measures later in this section of the final rule, but an illustrative example would be the objective of maintain an up-to-date problem list. The measure associated with this objective is "More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data." Therefore, if an EP only practices at one location or has certified EHR technology available at all practice locations then the denominator would be all unique patients seen during the EHR reporting period. However, if an EP practices at multiple locations and only has certified EHR technology for 80 percent of their patient encounters, then the denominator is only those unique patients seen at locations where certified EHR technology is available. We reiterate that this is not to account for certified EHR technology downtime, Certified EHR technology is available at a location if it is available at the start of the EHR reporting period regardless of its actual availability for any given day during the EHR reporting period.

After consideration of the comments received, we are finalizing this requirement as proposed.

Discussion of the Burden Created by the Measures Associated With the Stage 1 Meaningful Use Objectives

Comment: Many commenters expressed concerns about the difficulties of capturing the denominators for the measures that are expressed as percentages. They pointed out that the formulas in the proposed rule would require providers to conduct labor-intensive counts of paper documents such as prescriptions or laboratory results in order to compute the denominators of the percentage based measures. Some commenters suggested that we adopt alternative measurement mechanisms, for example establishing simple counts of electronic occurrences, while others proposed that denominators be computed utilizing only data collected in the certified EHR technology.

Response: We acknowledge that the percentage-based measures, as expressed in the proposed rule, would create a reporting burden for EPs, eligible hospitals, and CAHs, and we examined a number of alternatives that potentially reduce the burden of reporting.

In the proposed rule, we discussed the option of counts instead of percentages and due to comments received have reassessed this option in the final rule. This approach clearly has the advantage of simplifying the process. For example, rather than counting the number of prescriptions transmitted electronically and then dividing by the total number of prescriptions, the EP would simply need to count the number of electronically transmitted prescriptions until a benchmark number is passed. If the benchmark number is exceeded, then the provider meets the measure. However, there are several shortcomings to this approach. First, we received little input from commenters as to where the benchmark numbers for the various objectives should be set and any benchmark set now would not benefit

from public comment without significantly delaying the Medicare and Medicaid EHR incentive programs. (One exception was that a number of commenters suggested using the PQRI measure for e-prescribing, which is the generation of at least one eRx associated with a patient visit on 25 or more unique events during the reporting period.) Setting the limit too high would disadvantage small providers, since they would have smaller patient populations, while setting the limit too low would create requirements for larger providers that would be so limited as to be meaningless. A larger provider could implement the functionality for a much shorter period than the EHR reporting period and meet the count. In either case, it would be difficult to establish a trajectory in later stages that would result in meaningful progress being made by both small and large providers.

We then assessed the option of limiting the occurrences counted in the denominator to those included in the provider's certified EHR technology. As an example, if an EP captures 1,000 prescriptions as structured data in certified EHR technology, and electronically transmits 500 of these prescriptions, the EP's certified EHR technology generated score would be 50 percent. This approach does simplify the computation process, since this approach does not have to take into account whether some prescriptions were not included or included as unstructured data in the certified EHR technology. However, it does not demonstrate the extent to which the provider has used the certified EHR technology. For example, a provider that has captured only 10 prescriptions in the certified EHR technology as structured data, but writes 1,000 prescriptions because the provider achieved only a limited use of their certified EHR technology would also score 50 percent by electronically transmitting only 5 prescriptions according to an automatic report from the certified EHR technology. Again, this methodology does not lead providers toward an upward trajectory of both certified EHR technology deployment and accomplishment of meaningful use.

We selected a third option, which we believe addresses the shortcomings of the second option while still preserving much of the simplicity of that approach. In our approach, we focus on those measures whose denominator is not based on all patients, but rather a subset of patients or actions such as the ordering of a lab test or the recording of a patient's request for an electronic copy of their discharge instructions. We believe that it is reasonable to require an EP, eligible hospital, or CAH to know how many unique patients they care for in the EHR reporting period and therefore maintain that denominator where it applies. The maintenance of measures using the patient as the denominator as encompassing all patients ensures a certain level of utilization of certified EHR technology by the EP, eligible hospital, or CAH. If a measure encompassing all patients has a threshold of 80 percent, then at least 80 percent of the patients' records must be maintained using certified EHR technology otherwise the EP, eligible hospital or CAH could not possibly meet the threshold. We note a number of measures included in the core set (such as "Record Demographics" and "Maintain an Up-to-Date Problem List") require an analysis of all unique patients, and not just patients whose records are maintained in certified EHR technology As discussed later the thresholds for maintaining an up-to-date problem list, medication list and medication allergy list are set at 80 percent. We believe these thresholds will create a baseline that ensures that EPs, eligible hospitals and CAHS are maintain a minimum percentage of patient records in certified EHR technology, and allows the provider community to advance toward the longer-term objective of capturing all patient data in certified EHR technology. For those measures that focus on the recording of actions or subset of patients to generate the denominator, we limit the measures to the information for patients whose records are maintained in certified EHR technology. We offer the following examples that relate to the e-prescribing and the provision of electronic copy of a patient's health information:

E-Prescribing Example: An EP orders 1,000 prescriptions for patients whose records are maintained in their certified EHR technology and 500 of those are transmitted electronically. The EP's denominator is 1,000 prescriptions, the numerator is 500 prescriptions, and their score is 50 percent. If the EP captures all 1,000 prescriptions as structured data the calculation could be automated by the certified EHR technology. If the EP does not capture all 1,000 prescriptions as structured data than more manual review may be required. We would define "records maintained in the certified EHR technology" to include any patient for which sufficient data was entered in the certified EHR technology to allow the record to be saved, and not rejected due to incomplete data. This may be a more limited set of data, but an EP, eligible hospital, or CAH would still have to have sufficient information in certified EHR technology to meet the measures associated with Stage 1 of meaningful use. For example, an EP might be able to save a record with just a patient's name, but as the record would lack any information this patient would count in the denominator, but not the numerator for many objectives. *Electronic Copy of a Patient's Health Information Provided upon Request Example:* An EP maintains 1,000 patient records in their certified EHR technology. Of those patients, fifty make requests for electronic copies of their health information. The EP provides all of the electronic copies within three business days. The denominator is 50, the numerator is 50, and the EP's percentage is 100 percent. If the EP captures requests for information as structured data, the calculation could be automated by the certified EHR technology. If the EP does not capture all the requests as structured data then more manual review may be required. We will likely revisit the methodology in Stage 2, where we would expect that at least basic EHR functionality has been implemented throughout the provider enterprise.

After consideration of public comments, we are limiting the following objectives and their associated measures to patients whose records are maintained using certified EHR technology. Specific information on how to determine inclusion in the denominator and numerator is discussed in the full discussion of each objective later in this final rule.

- Use CPOE
- Generate and transmit permissible prescriptions electronically (eRx)
- Record and chart changes in vital signs
- Record smoking status for patients 13 years old or older
- Record advance directives for patients 65 years old or older
- Incorporate clinical lab-test results into certified EHR technology as structured data
- Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request
- Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request
- Provide clinical summaries for patients for each office visit
- Send reminders to patients per patient preference for preventive/follow-up care

• Perform medication reconciliation at relevant encounters and each transition of care

• Provide summary care record for each transition of care and referral

Discussion on Meaningful Use Relationship to Certified EHR Technology

Comment: We received several comments requesting more specific information of how certified EHR technology will accomplish meaningful use. Some commenters expressed concern that patient clinical outcome measurement and improvement was not addressed explicitly in the requirements of certified EHR technology, but rather the requirements focused data entry and provision of data electronically.

Response: One of the main purposes of certifying EHR technology is to provide the EP, eligible hospital, or CAH with confidence that the technology will not be the limiting factor in the achievement of meaningful use. As such, all questions of how or will certified EHR technology be able to accomplish meaningful use broadly or at a specific objective level are best answered by ONC. CMS and ONC have worked closely since the enactment of the HITECH Act to ensure certification fully supports meaningful use. We explicitly link each meaningful use objective to certification criteria for certified EHR technology. The capabilities and standards that are certified are those that are used to meet the Stage 1 objectives of meaningful use. This way we ensure that certified EHR technology can accomplish meaningful use and meaningful use has the intended consequences of improving the healthcare priorities that make up meaningful use.

Discussion on the Relationship Between a Stage 1 Meaningful Use Objective and Its Associated Measure

Comment: Many commenters pointed out gaps between what they believed were the anticipated results from an objective and the results that are measured by the associated measure. A particular concern of some of these commenters is cases where the certification criteria supports the measure, but in their view fell short of supporting the objective.

Response: In the proposed rule, we attempted to draw a clear distinction between the objective and the associated measure. The objectives represent a wide range of activities some of which are commonplace for EPs, eligible hospitals, and CAHs using EHRs today, while others are ambitious goals even for the most sophisticated EHR user of today. For some objectives, all aspects of the objective are within the control of the EP, eligible hospital, or CAH. Other objectives rely on electronic exchange with partners or external infrastructure over which EPs, eligible hospitals and CAHs may have little influence and no control. We have attempted to accommodate these differences when we select the Stage 1 measure for a given objective. The measure more accurately reflects our view of what is feasible for Stage 1 than the objective itself. The certification criteria necessarily reflect more on the measure than the objective, as full compliance with an objective is beyond the scope of what can be accomplished for a significant number of EPs, eligible hospitals or CAHs in our timeframe for Stage 1. This rationale was our assertion in the proposed rule as the justification for measures that represent less than full achievement of their objective. This is further supported by some of the comments received although for any given objective the comments addressing that objective were a small fraction of the total number of comments received and views on how much a measure should allow for less than full achievement varied widely among those commenting. Although we received over 2,000 public comments, the number of specific comments addressing an individual objective were relatively small ranging from 40 to 200. We reviewed those comments and made specific changes to measures in the discussion of each objective. We reiterate that achievement of the measure always equates to achievement of the objective for Stage 1 of meaningful use. We also reiterate that certified EHR technology will always be able to support achievement of the measure by including the necessary functionalities. However, as with any technology, certified EHR technology is only as good as the information it contains and getting information into certified EHR technology is heavily dependent on processes developed by the EP, eligible hospital, or CAH. It is for this reason that all measures, even those for objective whose aspects are fully under the control of the EP, eligible hospital, or CAH, represent less than full fulfillment of the objective to varying degrees. As stated, for demonstrating meaningful use and any follow up review by CMS or the States, successfully meeting the associated measure always equates to successfully meeting the objective. Updated information on the associated measures including the numerator, denominator, thresholds and exclusions are as discussed in the following section. More detailed specifications and guidance on calculating the measures will be issued soon after the publication of this final rule.

As we described in the proposed rule, in discussing the objectives that constitute the Stage 1 criteria of meaningful use, we adopted a structure derived from recommendations of the HIT Policy Committee of grouping the objectives under care goals, which are in turn grouped under health outcomes policy priorities. We believe this structural grouping provides context to the individual objectives; however, the grouping is not itself an aspect of meaningful use. The criteria for meaningful use are based on the objectives and their associated measures.

We will now review the comments for each objective and measure and make changes to our original proposal or finalize as proposed.

(1) Objectives and Their Associated Measures

The HIT Policy Committee identified as its first health outcomes policy priority improving quality, safety, efficiency and reducing health disparities. The HIT Policy Committee also identified the following care goals to address this priority:

• Provide access to comprehensive patient health data for patient's healthcare team.

• Use evidence-based order sets and CPOE.

• Apply clinical decision support at the point of care.

• Generate lists of patients who need care and use them to reach out to those patients.

• Report information for quality improvement and public reporting.

As we explained in the proposed rule, for the last care goal, the HIT Policy Committee proposed the goal as "Report to patient registries for quality improvement, public reporting, etc." We have modified this care goal, because we believe that patient registries are too narrow a reporting requirement to accomplish the goals of quality improvement and public reporting. We note that the HIT Policy Committee's recommended objectives include the reporting of quality measures to CMS. We do not believe that CMS would normally be considered a "patient registry". We also removed the phrase "etc." We believe that the level of ambiguity created by "etc" is not appropriate for Federal regulations.

NPRM EP Objective: Use CPOE.

NPRM Eligible Hospital Objective: Use CPOE for orders (any type) directly

entered by the authorizing provider (for example, MD, DO, RN, PA, NP).

In the proposed rule, we described CPOE as entailing the provider's use of computer assistance to directly enter medical orders (for example, medications, consultations with other providers, laboratory services, imaging studies, and other auxiliary services) from a computer or mobile device. The order is also documented or captured in a digital, structured, and computable format for use in improving safety and organization. We said that for Stage 1 criteria, it will not include the electronic transmittal of that order to the pharmacy, laboratory, or diagnostic imaging center.

Comment: A majority of commenters recommended that EPs, eligible hospitals, and CAHs be allowed to defer CPOE for varying lengths of time ranging from 2012 to 2017. The commenters cited various reasons for deferment including that CPOE is an advanced clinical function that typically is the last process to be implemented due to the need to build the entire infrastructure to support the CPOE process. Other commenters noted an increased burden as if the orders cannot be transmitted, then duplicate paper orders will have to be produced which can lead to patient safety risks. Commenters also noted that CPOE appears in the latter stages of the Certification Commission for Healthcare Information Technology (CCHIT) EHR implementation process. A minority, but significant number of comments encouraged CMS to maintain CPOE for 2011. Those commenters in favor of retaining CPOE in 2011 believed that CPOE is a basic EHR feature that should be a standard offering of a certified EHR technology and is critical to improving quality of care through audit trails and alerting of delinquent order and/or delinquent deferred orders.

Response: We have determined that CPOE should be included in the core set of measures for Stage 1 in order to advance meaningful use. CPOE is a foundational element to many of the other objectives of meaningful use including exchange of information and clinical decision support. Many commenters, including several physician associations, the HIT Policy Committee and members of Congress through their endorsement of the HIT Policy Committee's recommendation, recommended that CPOE be required in Stage 1. CPOE has been a major initiative of US hospitals for over a decade and is a foundational functionality to many of the activities that further the health care policy priorities of meaningful use. For example, entering a medication order using CPOE allows the EHR to provide feedback on whether the medication may have adverse reactions with other medications the patient is taking. Another benefit of CPOE is that greatly simplifies the workflow process of inputting information into certified EHR technology in a structured way to populate the patient record.

Comment: Several commenters asked that we further specify who could enter the order using CPOE. Some commenters stated that only the ordering provider should be permitted to enter the order. These commenters stated that the ordering professional needs to be presented with clinical decision support at the time of entry and that the relay of an order to another individual is a source of potential error. Other commenters recommended that any licensed healthcare professional or indeed any individual (licensed or not) who receives the order from the ordering provider be permitted to perform the CPOE. The most common argument presented by these commenters is that this is currently how CPOE is handled in practice and a shift to entry by only the ordering provider would be too disruptive to workflow.

Response: We agree with those commenters who recommend allowing any licensed healthcare professional to enter orders using CPOE. We further refine this recommendation to be that any licensed healthcare professional can enter orders into the medical record per state, local and professional guidelines. While we understand that this policy may decrease opportunities for clinical decision support and adverse interaction, we believe it balances the potential workflow implications of requiring the ordering provider to enter every order directly, especially in the hospital setting. We disagree with commenters that anyone should be allowed to enter orders using CPOE. This potentially removes the possibility of clinical decision support and advance interaction alerts being presented to someone with clinical judgment, which negates many of the benefits of CPOE.

Comment: We received requests for clarification of this objective and what types of orders would meet this requirement.

Response: Our intent in the proposed rule was to capture orders for medications, laboratory or diagnostic imaging.

However, after careful consideration of the comments, we are adopting an incremental approach by only requiring medication orders for Stage 1. First, this supports the objectives of e-prescribing, drug-drug and drug-allergy checks. Second, this requirement will improve patient-safety because of the alignment of ordering medications in a structured data format will enable providers to create registries of patients for potential medical recalls, participate in surveillance for potential sentinel events and life-threatening side effects of new medications. Third, other measures involving transitions of care documents and summary of care document will require the entry of an active medication list. After consideration of the public comments received, we are finalizing the meaningful use objective for EPs at 495.6(d)(1)(i) and for eligible hospitals, and CAHs at 495.6(f)(1)(i) as "Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines".

NPRM EP Measure: CPOE is used for at least 80 percent of all orders.

NPRM Eligible Hospital or CAH Measure: For eligible hospitals, CPOE is used for 10 percent of all orders.

In the proposed rule under CPOE, we discussed several concepts related to any associated measure of any objective that relies on a percentage calculation. These are the use of a percentage versus a count; setting a threshold for measures not requiring the electronic exchange of information; EPs practicing in multiple locations, some of which may not have certified EHR technology available, and the patient population to which the measure would apply. All except the last of these received extensive comments and are addressed in comment and response sections earlier in this section. In the proposed rule, we said that we would base the measures associated with the objectives on both the Medicare/Medicaid patient population and all other patients as well. We said that we believe it is unlikely that an EP would use one record keeping system for one patient population and another system for another patient population at one location and that requiring reporting differences based on payers would actually increase the burden of meeting meaningful use. We received very few comments on this aspect of our proposed rule and those that were received were generally supportive of this proposal. Therefore, we are finalizing the policy that all meaningful use measures be calculated based on the eligible provider's entire patient population (except where otherwise noted).

Comment: Nearly every commenter who commented on CPOE objected to our proposal to limit this measure to the

inpatient department (Place of Service Code 21) for the eligible hospital or CAH. Commenters stated that this limitation was inappropriate given the manner in which hospitals use EHR technology. To account for current practice, the commenters recommended the measures be expanded to include the emergency department (ED) (POS 23). Other reasons cited by commenters were that orders begin in the ED and remain open as the patient transitions to inpatient (for example, infusions), transitioning from paper documentation in the ED to electronic for subsequent care is unsafe as it can result in missed information, and/or transcription errors as the initial allergies and medications are entered into the system, significant data collection occurs in the ED that would not be included in the system, the exclusion of the ED creates disincentives to adoption and that the ED is a hybrid of temporal and functional services that are neither purely ambulatory nor inpatient.

Response: We agree with the commenters, and therefore are expanding this objective and its associated measure to the emergency room (POS 23). More information on place of service codes is available at *http://www.cms.gov/PlaceofServiceCodes/*. Furthermore, given the revision to the HITECH Act that changed hospital based eligible professionals to include only the setting of inpatient and emergency departments and all of the benefits of integration of these two departments spelled out by commenters we will adopt both departments when considering the measure of eligible hospitals or CAHs unless we find there are unique circumstances of an objective and its associated measure that would preclude the inclusion of the emergency department for meaningful use. This change does not affect the incentive payment calculation described in section II.B. of this final rule

Comment: We received several recommendations from commenters that the requirement of a percentage measurement for determining whether an EP, eligible hospital or CAH meets this objective should be replaced with a numerical count for CPOE and many other measures associated with percentage thresholds. The two main reasons given for switching to numerical counts are the burden of calculating the percentage if it cannot be done automatically using certified EHR technology and the assertion that if an EP, eligible hospital, or CAH does something a specific number of times it can be assumed that it is done often enough to constitute meeting the objective for Stage 1 of meaningful use.

Response: We have previously discussed the merits of a percentage based measure over a count based measure earlier in this section under the discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. However, we do try to seek a balance reducing the burden on providers while still ensuring the progression of meaningful use of certified EHR technology. In the next comment/response, we discuss changes to this measure that respond to concerns regarding burden.

Comment: Many commenters representing EPs as well as other commenters recommended lowering the CPOE threshold for EPs. Those commenters representing EPs generally recommended parity with eligible hospitals at 10 percent, while other commenters recommending a reduction generally recommended 50 percent.

Response: With CPOE, we had a unique situation of disparate thresholds between EPs and hospitals. This was due to recommendations prior to the proposed rule by the HIT Policy Committee. Eligible hospitals were granted an even lower threshold for this particular requirement. The reason given for this recommendation was that CPOE is one of the last functionalities to be implemented in the hospital setting. Commenters point out that holds true for EPs as well. As discussed above, given the limitations we are placing on the numerator and denominator for calculating the CPOE percentage, we no longer see a compelling reason to maintain disparate thresholds for the EPs and the eligible hospital/CAH.

Comment: Commenters have suggested that our proposal to count an action per unique patients could be applied to the measure for CPOE as well through a revised measure of "[a]t least 10% of unique patients seen by the EP or admitted to the eligible hospital or CAH have at least one order entered using CPOE." Commenters also pointed to CPOE as an example of a case where adequate lead time is necessary to implement certified EHR technology.

Response: At the heart of this new basis for this measure is the assumption that every patient would have at least one order that could be entered using CPOE. We believe this is a reasonable assumption for EPs, eligible hospitals and CAHs. According to analysis of 25,665 office-based visits in the 2005 National Ambulatory Medical Care Survey, 31 percent of visits included a new medication order, and 44 percent included at least one refill; 66 percent had any type of medication order. However, whether a medication order is appropriate for every practice could vary significantly by scope of practice; therefore, for the final rule, we are further limiting the denominator to patients with at least one medication listed in their medication list. We believe that this limitation will reduce providers' burden as compared to accounting for all orders. To further reduce the burden on providers, we also will limit the numerator to unique patients with at least one medication order entered using CPOE. Because we have reduced provider burden by limiting the denominator and numerator as discussed above, we believe that a corresponding increase in the CPOE threshold is appropriate for hospitals and CAHs. For stage 1, we are finalizing a threshold for CPOE of 30 percent for EPs, eligible hospitals, and CAHS. We believe this relatively low threshold, in combination with the limitation to only medication orders, will allow hospitals and EPs to gain experience with CPOE. However, as providers gain greater experience with CPOE, we believe it is reasonable to expect greater use of the function. As explained above, we also believe CPOE is foundational to many other objectives of meaningful use. For these reasons, we believe it is reasonable to expect providers to move to a 60 percent threshold at Stage 2 of meaningful use. Thus, for this measure, we are finalizing, for Stage 2 of meaningful use, that EPs, eligible hospitals and CAHs must meet a 60 percent threshold for CPOE. Therefore, we are finalizing a Stage 2 measure for CPOE at § 495.6(h) for EPs and § 495.6(i) for eligible hospitals and CAHs as "More than 60 percent of all unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have at least medication one order entered using CPOE".

Comment: We received several comments asking for clarification of the term unique patient in response to various objectives.

Response: In the proposed rule, we state, "the reason we propose to base the measure on unique patients as opposed to every patient encounter, is that a problem list would not necessarily have to be updated at every visit." To further describe the concept of "unique patient" we mean that if a patient is seen by an EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) more than once during the EHR reporting period

then for purposes of measurement they only count once in the denominator for the measure. All the measures relying on the term "unique patient" relate to what is contained in the patient's medical record. Not all of this information will need to be updated or even be needed by the provider at every patient encounter. This is especially true for patients whose encounter frequency is such that they would see the same provider multiple times in the same EHR reporting period. Measuring by every patient encounter places an undue burden on the EPs, eligible hospitals and CAHs and may have unintended consequences of affecting the provision of care to patients merely to comply with meaningful use. Given the emphasis placed on the reporting burden by commenters as described in the beginning of this section, we believe that our concerns about the burden of measurement were well founded. We also continue to believe that the use of patient encounters could have unintended consequences on the provision of care by providers.

Comment: Some commenters asked whether the CPOE objective and associated measure require transmission of the order. Most of these commenters were opposed to such transmission in Stage 1 for various reasons such as the cost of developing interfaces between EHRs and laboratory and radiology service providers, the volume of transmissions would outpace the capacity to connect, HIE infrastructure is not yet mature enough and the lack of the requirement for non-eligible entities to participate (for example, laboratory vendors, pharmacies). Some commenters supported the inclusion of the transmission of the order as they believed this would provide better outcomes than if the transmission was not required.

Response: In the proposed rule, we stated, "For Stage 1 criteria, we propose that it will not include the electronic transmittal of that order to the pharmacy, laboratory, or diagnostic imaging center." While a few commenters recommended that this objective be changed to require transmission, given the large opposition to the objective and measure as proposed and the reasons commenters presented against transmission, it would not be responsive to the vast majority of commenters to expand this objective beyond our proposal. We agree with the commenters that said the HIE infrastructure is still being developed in most parts of the country. Furthermore, we note that in the hospital setting, most medication orders would not require transmission outside of the certified EHR technology of the hospital. For EPs, we already address transmission of the medication order in a separate objective for e-prescribing. Therefore, we finalize the proposal that the transmission of the order is not included in the objective or the associated measure for Stage 1.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at 495.6(d)(1)(ii) of our regulations and for eligible hospitals, and CAHs at § 495.6(f)(1)(ii) of our regulations to "More than 30 percent of all unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have at least medication one order entered using CPOE".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(a) for EPs and 45 CFR 170.306(a) for eligible hospitals and CAHs. The ability to calculate the measure is included in certified EHR technology. Thus, for example, an EP, eligible hospital or CAH must use a certified functionality in entering the medication order, and could not use a functionality that has been added by the EHR vendor, but that is outside the scope of the certification. We believe this rule is necessary to ensure that the EP, eligible hospital, or CAH is actually making meaningful use of "certified" EHR technology, and is not using non-certified technology. In addition, requiring providers to use functionalities that are certified will ensure the interoperability of information maintained in the EHR as providers will be able to operate according to consistent standards. We believe this standardization and consistency is key to realizing the goal of using EHR technology to improve health care.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the only patients that are included in the denominator are those patients whose records are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients with at least one medication in their medication list seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period
- *Numerator:* The number of patients in the denominator that have at least one medication order entered using CPOE.
- *Threshold:* The resulting percentage must be more than 30 percent in order for an EP, eligible hospital or CAH to meet this measure.

Exclusion: If an EP's writes fewer than one hundred prescriptions during the EHR reporting period they would be excluded from this requirement as described previously in this section in our discussion whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We do not believe that any eligible hospital or CAH would have less than one hundred prescriptions written for patients admitted to their inpatient and emergency departments during the EHR reporting period.

NPRM EP/Eligible Hospital Objective: Implement drug-drug, drug-allergy, drug-formulary checks

In the proposed rule, we did not elaborate on this objective.

Comment: Many commenters requested clarification as to what formulary the checks would be conducted against.

Response: Ideally, this check would be performed against any formulary that may affect the patient's welfare, inform the provider as to the best drug to prescribe or provide the patient and provider information on the drug's cost to both the patient and any third party payer. We recognize, however, that not every available third party payer, pharmacy benefit management, preferred drug list is standardized and made available for query through certified EHR technology. As we cannot through this regulation impose such a requirement on every developer of a formulary, we do not require that an EP/eligible hospital/CAH would have to accommodate every formulary in their implementation. However, at a minimum an EP/eligible hospital/CAH must have at least one formulary that can be queried. This may be an internally developed formulary or an external formulary. The formularies should be relevant for patient care during the prescribing process. To further address this, we expect that this measure will be expanded to be counted on a transactional basis for future stages.

Comment: Commenters suggested separating the objective into one objective for the clinical checks (drug-drug and drug-allergy) and a second objective for the administrative check

(drug-formulary). The rationale stated for the division was that clinical measures are focused on preventing medication errors versus encouraging consideration of cost when prescribing medications. In addition, the two types involve connections to different kinds of resources (drug safety information versus formulary information).

Response: We agree that these should be separate objectives for the reasons stated by the commenters and split them accordingly.

Comment: We received comments that these functions were really part of CPOE and electronic prescribing. Commenters most commonly noted that the drug formulary is part of electronic prescribing, as is currently the case under the Medicare e-Prescribing program.

Response: While we agree that the drug-drug, drug-allergy, drug-formulary checks, CPOE, e-prescribing meaningful use objectives all serve the same broader goal of ensuring accurate ordering and prescribing that takes into account all available information about the patient the functions and their readiness for Stage 1 of meaningful use are distinct. In terms of functions, CPOE and e-prescribing could be performed without the drug to drug, drug-allergy or drug-formulary checks. Similarly, it is not necessary for CPOE or e-Prescribing to take place in order for a drug to drug allergy check to occur. In terms of readiness and ability to measure progress for Stage 1 of meaningful use, CPOE and e-prescribing both are percentage based measures of a distinct activity that creates a record even in today's EHR's and paper patient records. The viewing and consideration of information presented to the provider on possible drug interactions is not a similarly distinct activity and does not currently create a record. So while the goal of these functionalities is similar, we believe drug-drug, drug-allergy, drug-formulary checks create unique concerns for implementation and demonstration of meaningful use, and therefore we maintain them as separate objectives.

Comments: Several commenters expressed concern of "alert fatigue" occurring with drug-drug interaction checks. Alert fatigue or otherwise known as "pop-up" fatigue is a commonly perceived occurrence with electronic medical records and clinical decision support tools in which alerts are presented to the user when a potential safety issue is identified by the system (for example, drug to drug interaction). The alerts, while beneficial in some cases, can result in a type of "fatigue" whereby the provider, after receiving too many alerts, begins to ignore and/or override the alerts. Receiving too many alerts can result in slowing the provider down rendering the alert useless. Commenters recommended some changes to the objective and associated measure to mitigate the risk of "alert fatigue" such as limiting the checks for interactions to only the most critical medications or allowing for adjustment of risk levels rather than an on/off functionality.

Response: We recognize "alert fatigue" is a potential occurrence with drug-drug and drug-allergy checks. However, meaningful use seeks to utilize the capabilities of certified EHR technology and any means to address alert fatigue requires a critical evaluation of each alert. We believe this is beyond the scope of the definition of meaningful use. We believe these checks are valuable and improve patient care and therefore do not remove them to address alert fatigue.

Comment: Commenters recommended food allergies be included in the drug-allergy check as some drugs contain ingredients that are contraindicated in individuals with certain allergies.

Response: We certainly agree that some allergies other than drug can interact with drugs; however, as we stated under our discussion of the objective "Medication Allergy List", the ability to identify other types of allergies in a useful way are not yet available to the extent necessary to require them in Stage 1 of meaningful use. This certainly does not preclude any EP, eligible hospital, or CAH from working with the designers of their certified EHR technology to include this functionality.

Comment: A commenter requested clarification as to whether the drug-drug, drug-allergy and drug-formulary checks are required for contrast media and imaging agents used by radiologists.

Response: We do not link the checks to specific drugs or agents. However, we note that is common practice in radiology to identify a patient's past drug and food allergies and take appropriate interventions if necessary. Therefore, the drug-drug, drug-allergy and drug-formulary checks would be appropriate prior to administration of contrast media and imaging agents to patients.

After consideration of the public comments received, we are finalizing the meaningful use objective for EPs at § 495.6(d)(2)(i) and for eligible hospitals and CAHs at § 495.6(f)(2)(i) as "Implement drug-drug and drug-allergy checks." We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

In addition, we are finalizing the meaningful use objective at for EPs at § 495.6(e)(1)(i) and for eligible hospitals and CAHs at § 495.6(g)(1)(i) of our regulations as "Implement drug-formulary checks."

NPRM EP/Eligible Hospital Measure: The EP/eligible hospital/CAH has enabled the drug-drug, drug-allergy, and drug-formulary check functionality

In the proposed rule we discussed that the capability of conducting automated drug-drug, drug-allergy, and drug-formulary checks is included in the certification criteria for certified EHR technology. This automated check provides information to advise the EP, eligible hospital, or CAH's decisions in prescribing drugs to a patient. The only action taken by the EP, eligible hospital, or CAH is to consider this information. Many current EHR technologies have the option to disable these checks and the certification process does not require the removal of this option. Therefore, in order to meet this objective, an EP, eligible hospital, or CAH would be required to enable this functionality and ensure they have access to at least one drug formulary. While this does not ensure that an EP, eligible hospital or CAH is considering the information provided by the check, it does ensure that the information is available.

After consideration of the public comments received on the objective, we believe the measure as proposed requires more clarity on the length of time for which the functionality must be enabled, which we clarify to be the entire EHR reporting period. Therefore, we are modifying the meaningful use measure for "Implement drug-drug and drug-allergy checks for the entire EHR reporting period" for EPs at § 495.6(d)(2)(ii) and for eligible hospitals and CAHs at § 495.6(f)(2)(ii) of our regulations to "The EP/eligible hospital/CAH has enabled this functionality for the entire EHR reporting period."

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(a). The ability to calculate the measure is included in certified EHR technology.

As this objective only requires that functionalities of certified EHR technology be enabled, we do not believe that any EP, eligible hospital or

CAH would need an exclusion for this objective and its associated measure.

After consideration of the public comments received on the objective, we are modifying the meaningful use measure for "Implement drug-formulary checks" for EPs at § 495.6(e)(1)(ii) and for eligible hospitals and CAHs at § 495.6(g)(1)(ii) of our regulations to "The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external formulary for the entire EHR reporting period."

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(b). The ability to calculate the measure is included in certified EHR technology.

The consideration of whether a drug is in a formulary or not only applies when considering what drug to prescribe. Therefore, we believe that any EP who writes fewer than one hundred prescriptions during the EHR reporting period should be excluded from this objective and associated measure as described previously in our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP/Eligible Hospital Objective: Maintain an up-to-date problem list of current and active diagnoses based on ICD–9–CM–CM or SNOMED CT®

In the proposed rule, we described the term "problem list" as a list of current and active diagnoses as well as past diagnoses relevant to the current care of the patient.

Comment: Several commenters noted that the coding of problem lists at the point of care is outside the normal workflow process and would be disruptive.

Response: We did not and do not intend that coding of the diagnosis be done at the point of care. This coding could be done later and by individuals other than the diagnosing provider.

Comment: Commenters suggested including ICD–10–CM, the Diagnostic and Statistical Manual of Mental Disorders and explicitly allowing subsets of SNOMED CT®.

Response: We have removed the references to specific standards, as we believe specifying the relevant standards falls within the purview of ONC. For ONC's discussion of this functionality and the relevant standards including response to the above comment, we refer readers to ONC's final rule.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(d)(3)(i) and for eligible hospitals at § 495.6(f)(3)(i) of our regulations to "Maintain an up-to-date problem list of current and active diagnoses".

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all unique patients seen by the EP or admitted to the eligible hospital or CAH have at least one entry or an indication of none recorded as structured data.

In the proposed rule, we introduced the concept of "unique patients" in the discussion of this objective. We received many comments requesting clarification of this term and address those in the comment and response section under our discussion of the CPOE measure.

Comment: A few commenters stated that "None" is not a clinically relevant term and should be replaced with no known problem or no problem.

Response: Our intent is not to dictate the exact wording of the specific value. Rather we are focused on the overall goal of making a distinction between a blank list because a patient does not have known problems and a blank list because either no inquiry of the patient has been made, or problems have been recorded through other means. As long as the indication accomplishes this goal and is structured data, we do not believe it is necessary to prescribe the exact terminology, thus leaving that level of detail to the designers and users of certified EHR technology.

Comment: Commenters requested clarification of the term "up-to-date".

Response: The term "up-to-date" means the list is populated with the most recent diagnosis known by the EP, eligible hospital, or CAH. This knowledge could be ascertained from previous records, transfer of information from other providers, or querying the patient. However, not every EP has direct contact with the patient and therefore has the opportunity to update the list. Nor do we believe that an EP, eligible hospital, or CAH should be required through meaningful use to update the list at every contact with the patient. There is also the consideration of the burden that reporting places on the EP, eligible hospital, or CAH. The measure, as finalized, ensures the EP, eligible hospital, or CAH has a problem list for patients seen during the EHR reporting period, and that at least one piece of information is presented to the EP, eligible hospital, or CAH. The EP, eligible hospital, or CAH can then use their judgment in deciding what further probing or updating may be required given the clinical circumstances.

Comment: Commenters stated that this measure should be replaced with either a simple attestation of yes, the problem list exists or the percentage of the measure should be replaced with a count. Alternatively, that the percentage should be maintained, but that the threshold should be lowered. Commenters generally supported this lowering of the threshold for one or all of the following reasons: It may require a change in traditional workflow; implementation and rollout of certified EHR technology creates unforeseeable system downtimes, complications, and the required clinical classification systems are not geared toward clinical information.

Response: For reasons discussed earlier in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, we believe a percentage is a more appropriate measure than those suggested by comments. As this objective relies solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information, we believe it is appropriate to set a high percentage threshold. In the proposed rule, we set the percentage required for successful demonstration at 80 percent. Though full compliance (that is, 100 percent) is the ultimate goal, 80 percent seemed an appropriate standard for Stage 1 meaningful use as it creates a high standard, while still allowing room for technical hindrances and other barriers to reaching full compliance. We proposed 80 percent for every measure with a percentage that met the criteria of relying solely on a capability included as part of certified EHR technology and are not, for purposes of Stage 1 meaningful use criteria, reliant on the electronic exchange of information. Commenters generally agreed with this alignment; however, they disagreed that 80 percent sufficiently allows for "technical hindrances and other barriers". Commenters have highlighted numerous barriers towards successfully meeting an 80 percent threshold including technical barriers, barriers to implementation, applicability to all patients and all provider types eligible for the EHR incentives, patient requested exclusions and others. We address some of these with specific exclusions from the measure as

discussed previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. Although some technical issues exist, recording an up-to-date problem list remains largely within the individual provider's control and does not rely to a large degree on some external sender or receiver of structured electronic health data. In addition, there is a standard of practice for collecting the elements required for an up-to-date problem list. Although the commenters may be right that some clinical workflow needs to change, that is an integral part of meaningful use of EHRs. Although we do not expect all clinical workflow to adapt in Stage 1, there is an expectation that the clinical workflow necessary to support the Stage 1 priority of data capture and sharing will be in place in order to effectively advance meaningful use of EHRs. In addition, given the wide range of activities that must occur for meaningful use, we believe that most EPs, eligible hospitals and CAHs will have fully rolled out the capabilities required by this objective and the others with an 80 percent threshold prior to the start of the EHR reporting period thereby reducing the likelihood of unexpected system downtime and other implementation complications.

For situations in which there is an existing standard of practice and complying is fundamentally within the provider's control and where the objective relies solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information, for the final rule, we adopt, the reasonably high threshold of 80 percent. We believe existing infrastructure and expectations support this relatively high target. This foundational step of structured data capture is a prerequisite for many of the more advanced functionalities (for example, clinical decision support, clinical quality measurement, etc.) for which a solid evidence base exists for improved quality, safety and efficiency of care. Without having most of a provider's up-to-date problem lists in structured, electronic data, that provider will have major challenges in building more advanced clinical processes going forward.

For other situations, where the objective may not be fundamentally within the provider's control and is not an existing standard of practice, but where objective continues to rely solely on a capability that is included as part of certified EHR technology and is not reliant on electronic exchange of information, we are setting the percentage at 50 percent. This was the most commonly recommended percentage for these objectives that rely solely on a capability included as part of certified EHR technology and do not rely on the electronic exchange of information.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(3)(i) and for eligible hospitals at § 495.6(f)(3)(i) of our regulations to "More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(c). The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator who have at least one entry or an indication that no problems are known for the patient recorded as structured data in their problem list.
- *Threshold:* The resulting percentage must be more than 80 percent in order for an EP, eligible hospital, or CAH to meet this measure.

We do not believe that any EP, eligible hospital, or CAH would be in a situation where they would not need to know at least one active diagnosis for a patient they are seeing or admitting to their hospital. Therefore, there are no exclusions for this objective and its associated measure.

NPRM EP Objective: Generate and transmit permissible prescriptions electronically (eRx).

Comment: Some commenters requested clarification of the term "permissible prescription."

Response: As discussed in the proposed rule, the concept of only permissible prescriptions refers to the current restrictions established by the Department of Justice on electronic prescribing for controlled substances in Schedule II. (The substances in Schedule II can be found at *http://www.deadiversion.usdoj.gov/schedules/orangebook/e_cs_sched.pdf*). Any prescription not subject to these restrictions would be permissible. We note that the Department of Justice recently released a notice of proposed rulemaking that would allow the electronic prescribing of these substances; however, given the already tight timeframe for Stage 1 of meaningful use we are unable to incorporate any final changes that may result from that proposed rule. Therefore, the determination of whether a prescription is a "permissible prescription" for purposes of the eRx meaningful use objective should be made based on the guidelines for prescribing Schedule II controlled substances in effect when the notice of proposed rulemaking was published on January 13, 2010. We define a prescription as the authorization by an EP to a pharmacist to dispense a drug that the pharmacist would not dispense to the patient without such authorization. We do not include authorizations for items such as durable medical equipment or other items and services that may require EP authorization before the patient could receive them. These are excluded from the numerator and the denominator of the measure.

Comment: Some commenters recommended combining this objective and measure with other meaningful use objectives such as CPOE or the drug-drug, drug-allergy, drug-formulary checks

Response: We addressed these comments under our discussion of the CPOE objective.

After consideration of the public comments received, we are finalizing the meaningful use objective at 495.6(d)(4)(i) as proposed.

We have also included this objective in the core set. Section 1848(o)(2)(A)(i) of the Act specifically includes electronic prescribing in meaningful use for eligible professionals. This function is the most widely adopted form of electronic exchange occurring and has been proven to reduce medication errors. We included this objective in the core set based on the combination of the maturity of this objective, the proven benefits and its specific mention as the only example provided in the HITECH Act for what is meaningfully using certified EHR technology.

NPRM EP Measure: At least 75 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology.

In the proposed rule, we said that while this measure does rely on the electronic exchange of information based on the public input previously discussed and our own experiences with e-prescribing programs, we believe this is the most robust electronic exchange currently occurring and proposed 75 percent as an achievable threshold for the Stage 1 criteria of meaningful use. Though full compliance (that is, 100 percent) is the ultimate goal, 75 percent seemed an appropriate standard for Stage 1 meaningful use as it creates a high standard, while still allowing room for technical hindrances and other barriers to reaching full compliance.

Comment: A majority of commenters commenting on this measure believe the 75 percent threshold is too high. Several issues were raised to explain why the commenters believe the threshold is too high. The first is that barriers to e-prescribing exist at the pharmacies and they must be brought into the process to ensure compliance on the receiving end. The second represents the most common barrier cited by commenters and that is patient preference for a paper prescription over e-prescribing. A patient could have this preference for any number of reasons cited by commenters such as the desire to shop for the best price (especially for patients in the Part D "donut hole"), the ability to obtain medications through the VA, lack of finances, indecision to have the prescription filled locally or by mail order and desire to use a manufacturer coupon to obtain a discount. Other barriers mentioned by individual commenters were the limited functionality of current e-prescribing systems such as the inability to distinguish refills from new orders. Suggestions for addressing these difficulties were either to lower the threshold (alternatives recommended ranged from ten to fifty percent) or replacing the percentage with a numerical count of 25 to align with the 2010 Medicare e-Prescribing program. Of the comments received that requested a specific lower threshold, about half of them suggested a 50 percent threshold, and about half suggested a threshold of 25 percent to 30 percent.

Response: We are finalizing the use of a percentage threshold for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. In the proposed rule, we pointed out that we "believe this is the most robust electronic exchange currently occurring" to justify a high threshold of 75 percent given that this objective relies on electronic exchange. While we continue to believe this is the case, two particular issues raised by commenters caused us to reconsider our threshold. The first is the argument to include pharmacies in the Medicare and Medicaid EHR incentive programs to ensure compliance on the receiving end. Non-participation by pharmacies was presented by commenters as a major barrier to e-Prescribing. The second is patient preference for a paper prescription. In regards to the first argument, we do not have the ability to impose requirements on pharmacies through the HITECH legislation. However, prescriptions transmitted electronically have been growing at an exponential rate. The number of prescriptions sent electronically increased by 181 percent from 2007 to 2008 according to comments received. The number of pharmacies is also increasing rapidly. Yet this growth is uneven across the country and we wish to accommodate all EPs and do lower the threshold based on this argument. In regards to the second argument, we also have neither the ability nor the desire to limit patient preference. We considered allowing an EP to exclude from the denominator those instances where a patient requested a paper prescription. However, the burden of tracking when this occurs, the disincentive it would create for EPs to work with patients on establishing a relationship with a pharmacy and the hindrance to moving forward with e-prescribing lead us to address this through further reduction of the threshold as opposed to an exclusion. To address these concerns we are lowering the threshold for the e-prescribing measure to 40 percent. As pointed out by commenters, e-prescribing it is not yet standard of practice and there may be important external barriers beyond the provider's control. In particular, for e-prescribing, providers are dependent upon an external receiver of electronic health data, and there are significant variations depending on where the provider practices.

After consideration of the public comments received, we are modifying the meaningful use measure at § 495.6(d)(4)(ii) of our regulations to "More than 40 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(b). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the prescriptions in the denominator are only those for patients whose records are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances during the EHR reporting period.
- *Numerator:* The number of prescriptions in the denominator generated and transmitted electronically.
- *Threshold:* The resulting percentage must be more than 40 percent in order for an EP, eligible hospital, or CAH to meet this measure.

As addressed in other objectives and in comment response, this objective and associated measure do not apply to any EP who writes fewer than one hundred prescriptions during the EHR reporting period, as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP/Eligible Hospital Objective: Maintain active medication list.

Comment: Commenters requested clarification of the term "active medication list."

Response: We define an active medication list as a list of medications that a given patient is currently taking.

After consideration of the public comments received, we are finalizing this objective for EPs at § 495.6(d)(5)(i) and for eligible hospitals and CAHs at § 495.6(f)(4)(i) of our regulations as proposed.

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all unique patients seen by the EP or admitted by the eligible hospital have at least one entry (or an indication of "none" if the patient is not currently prescribed any medication) recorded as structured data.

As with the objective of maintaining a problem list, we clarify that the indication of "none" should distinguish between a blank list that is blank

because a patient is not on any known medications and a blank list because no inquiry of the patient has been made. As long as the indication accomplishes this goal and is structured data, we do not believe it is necessary to prescribe the exact terminology, preferring to leave that level of detail to the designers and users of certified EHR technology.

Comment: Commenters stated that the measure should be replaced with a numerical count or attestation and that the threshold was too high for reasons including the lack of current electronic exchange of information, difficulty capturing information as structured data and lack of readiness of HIE infrastructure.

Response: We are finalizing the use of a percentage for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. For the same reasons we explained under the discussion of up-to-date problem list, medication list is a functionality for which there is an existing standard of practice, it is foundational data capture function to make more advanced clinical processes possible, and complying is fundamentally within the provider's control. Therefore, we maintain the reasonably high threshold of 80 percent because the existing infrastructure and expectations support this target.

Comment: Commenters requested clarification as to whether the measure is limited to patients seen during the EHR reporting period.

Response: Yes, the measure applies to all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.

Comment: A few commenters expressed concern regarding the requirement that the entry must be recorded as "structured data." The commenters state that there may not be a code for over the counter, homeopathic or herbal products and that would penalize the provider even though the data is collected and recorded.

Response: The distinction between structured data and unstructured data applies to all types of information. Structured data is not fully dependent on an established standard. Established standards facilitate the exchange of the information across providers by ensuring data is structured in the same way. However, structured data within certified EHR technology merely requires the system to be able to identify the data as providing specific information. This is commonly accomplished by creating fixed fields within a record or file, but not solely accomplished in this manner. For example, in this case for it to be structured, if the patient is on aspirin, then that information should be in the system so that it can be automatically identified as a medication and not as an order, note, or anything else. An example of unstructured data would be the word aspirin, but no ability of the system to identify it as a medication.

Comment: A few commenters pointed out their current health information system vendor does not utilize RxNorm as its standard.

Response: This is a certification issue best addressed in the ONC final rule. We therefore have referred these comments to ONC for their consideration.

Comment: We received comments suggesting that this requirement could create additional privacy/security concerns for patients who do not want all physicians and their clinical staff to have access to their entire medication history. Examples provided included antidepressant, antipsychotic or erectile dysfunction medications.

Response: We are only concerned with medications that are known to the provider through querying the patient, their own records and the transfer of records from other providers. Meaningful use cannot address situations where the information is withheld from the EP, eligible hospital, or CAH by the patient or by other providers. We understand that some patients would prefer not to have their entire medical history available to all physicians and clinical staff. We also understand that laws in some states restrict the use and disclosure of information (including that related to medication) that may reveal that a patient has a specific health condition (for example, HIV). Recording data in a structured manner will facilitate the implementation of these preferences and policies in an electronic environment. It is easier to identify and potentially withhold specific data elements that have been recorded in a structured format than information recorded as free text.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(5)(ii) and for eligible hospitals at § 495.6(f)(4)(ii) of our regulations to "More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(d). The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period. A definition of unique patient is discussed under the objective of CPOE.
- *Numerator:* The number of patients in the denominator who have a medication (or an indication that the patient is not currently prescribed any medication) recorded as structured data.
- *Threshold:* The resulting percentage must be more than 80 percent in order for an EP, eligible hospital, or CAH to meet this measure. Detailed discussion of the more than 80 percent threshold can be found under the objective of maintaining an up-to-date problem list. We do not believe that any EP, eligible hospital or CAH would be in a situation where they would not need to know whether their patients are taking any medications. Therefore, there are no exclusions for this objective and its associated measure.

NPRM EP/Eligible Hospital Objective: Maintain active medication allergy list.

Comment: We received comments that limiting this list to medication allergies instead of all allergies was not consistent with efficient workflow and that all allergies should be housed in the same location within the EHR. Commenters also highlighted that lack of knowledge of other allergies such as latex and food allergies could lead to significant harm to the patient.

Response: We agree that information on all allergies, including non-medication allergies, provide relevant clinical quality data. However, while we agree that collecting all allergies would be an improvement, current medication allergy standards exists in a structured data format that may be implemented in Stage 1. We hope to expand this measurement to include all allergies as the standards evolve and expand to include non-medication allergies. We believe EP/eligible hospitals/CAHs should continue to document all allergies, regardless of origin, consistent with standard of care practice for that EP/eligible hospital/CAH. We encourage

them to work with the designers of their certified EHR technology to make this documentation as efficient and structured as possible.

Comment: A commenter inquired why the Substance Registration System Unique Ingredient Identifier (UNII) was not indicated for use until 2013 yet the measure requires the information to be recorded as structured data.

Response: Any standards for the structured vocabulary for medication allergies or other aspects of meaningful use are included in ONC final rule. Structured data does not require an established standard as discussed under the objective of maintaining a medication list.

Comment: We received a few comments requesting a definition of "allergy."

Response: We adopt the commonly held definition of an allergy as an exaggerated immune response or reaction to substances that are generally not harmful. The definition is derived from Medline Plus, a service of the U.S. National Library of Medicine and the National Institutes of Health.

After consideration of the public comments received, we are finalizing the meaningful use objective for EPs at 495.6(d)(6)(i) and for eligible hospitals and CAHs at 495.6(f)(5)(i) as proposed.

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all unique patients seen by the EP or admitted to the eligible hospital have at least one entry (or an indication of "none" if the patient has no medication allergies) recorded as structured data.

Comment: Multiple commenters noted that "none" is not a typical value to describe the absence of allergies in medical documentation and should be replaced with "no known allergies (NKA)," "no known drug allergies (NKDA)" or "no known medication allergies (NKMA)."

Response: Our intent is not to dictate the exact wording of the specific value. Rather we are focused on the overall goal of making a distinction between a blank list that is blank because a patient does not have known allergies and a blank list because no inquiry of the patient has been made or no information is available from other sources. As long as the indication accomplishes this goal and is structured data, we do not believe it is necessary to prescribe the exact terminology, preferring to leave that level of detail to the designers and users of certified EHR technology.

Comment: Given that the measure is only a one time check for a single entry, one commenter questioned whether this measure truly constitutes maintenance of an "active" list.

Response: We agree that this measure does not ensure that every patient under the care of every EP, eligible hospital, or CAH has an active or up-to-date medication list. However, not every EP comes in contact with the patient, and therefore has the opportunity to update the list. Nor do we believe that an EP, eligible hospital, or CAH should be required through meaningful use to update the list at every contact with the patient. There is also the consideration of the burden that reporting places on the EP, eligible hospital, or CAH. The measure as finalized ensures that the EP, eligible hospital, or CAH has not ignored having a medication allergy list for patients seen during the EHR reporting period and that at least one piece of information on medication allergies is presented to the EP, eligible hospital, or CAH. The EP, eligible hospital, or CAH can then use their judgment in deciding what further probing or updating may be required given the clinical circumstances at hand. Therefore, we are maintaining the measure of a one-time check for a single entry.

Comment: Several commenters recommended eliminating the percentage measurement and allowing the provider to attest that active medication lists are maintained in the certified EHR technology.

Response: We are retaining a percentage for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. For the same reasons we explained under the discussion of up-to-date problem list, medication-allergy list is a functionality for which there is an existing standard of practice, it is foundational data capture function to make more advanced clinical processes possible, and complying is fundamentally within the provider's control. Therefore, we maintain the reasonably high threshold of 80 percent because the existing infrastructure and expectations support this target.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(6)(ii) and for eligible hospitals at § 495.6(f)(5)(ii) of our regulations to "More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(e). The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period. The definition of "a unique patient" is provided under the objective of CPOE.
- *Numerator:* The number of unique patients in the denominator who have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data in their medication allergy list.
- *Threshold:* The percentage must be more than 80 percent in order for an EP, eligible hospital, or CAH to meet this measure. Detailed discussion of the rationale more than 80 percent threshold can be found at under the objective of maintain an up-to-date problem list.

We do not believe that any EP, eligible hospital or CAH would be in a situation where they would not need to know whether their patients have medication allergies and therefore do not establish an exclusion for this measure.

NPRM EP Objective: Record the following demographics: Preferred language, insurance type, gender, race and ethnicity, and date of birth.

NPRM Eligible Hospital Objective: Record the following demographics: Preferred language, insurance type, gender, race and ethnicity, date of birth, and date and cause of death in the event of mortality.

In the proposed rule, we noted that race and ethnicity codes should follow current federal standards published by the Office of Management and Budget (*http://www.whitehouse.gov/omb/inforeg_statpolicy/#dr*). We maintain that proposal for the final rule.

Comment: Some commenters requested clarification of whether all of the demographics are required and under what circumstances no indication might be acceptable. Examples of acceptable circumstances from commenters include patient unwillingness to report, language

barriers, and requirement to report ethnicity and/or race contrary to some state laws.

Response: In general, we do require that all demographic elements that are listed in the objective be included in a patient's record in certified EHR technology. However, we do not desire, nor could we require, that a patient provide this information if they are otherwise unwilling to do so. Similarly, we do not seek to preempt any state laws prohibiting EPs, eligible hospitals, or CAHs from collecting information on a patient's ethnicity and race. Therefore if a patient declines to provide the information or if capturing a patient's ethnicity or race is prohibited by state law, such a notation entered as structured data would count as an entry for purposes of meeting the measure.

Comment: Several commenters asked for clarity on the definition of preferred language. Commenters also indicated that standards are in development (ISO 639 and ANSIX12N Claim/Reporting Transaction). Some commenters also requested that we include the requirement that the EP, eligible hospital or CAH also communicate with the patient in their preferred language.

Response: Preferred language is the language by which the patient prefers to communicate. This is just a record of the preference. We do not have the authority under the HITECH Act to require providers to actually communicate with the patient in his or her preferred language, and thus do not require EPs, eligible hospitals, and CAHs to do so in order to qualify as a meaningful EHR user as suggested by some commenters. In regards to standards, those would be adopted under the ONC final rule.

Comment: Some commenters also requested clarity on the definition of race and ethnicity. Some commenters noted an Institute of Medicine report entitled "Race, Ethnicity and Language Data: Standardization for Health Care Quality Improvement", which makes recommendations for how to ask questions to collect information and builds on the OMB Standards for language, race and ethnicity. Some commenters were also concerned about situations where the available choices were not granular enough, did not properly account for mixed race and ethnicity, and when the patient did not know their ethnicity.

Response: In the proposed rule, we said that EPs, eligible hospitals and CAHs, should use the race and ethnicity codes that follow current federal standards published by the Office of Management and Budget (*http://www.whitehouse.gov/omb/inforeg_statpolicy/#dr*). We continue to believe that these standards should be applied for purposes of implementing the Stage 1 meaningful use objectives, but will consider whether alternative standards or additional clarification would be appropriate for future stages of meaningful use criteria. We believe it is beyond the scope of the definition of meaningful use to provide additional definitions for race and ethnicity beyond what is established by OMB. In regards to patients who do not know their ethnicity, EPs, eligible hospitals, and CAHs should treat these patients the same way as patients who decline to provide the race or ethnicity, that is, they should identify in the patient record that the patient declined to provide this information.

Comment: Some commenters requested additional clarity on insurance type and others recommended the elimination of insurance type due to the complexity of insurance coverage, the function of the EHR as a medical tool and not a financial one, the volatility of this information due to patients frequently changing plans and concerns that information on a patient's insurance status will have a possible behavioral influence on the providers if this information were presented.

Response: Classifying insurance involves two distinctions—the source of coverage and insurance design. Source of coverage refers to the type of funding, such as public, private or self-pay. The design of the insurance program, such as health maintenance program (HMO), preferred provider organization (PPO), high-deductible consumer directed plan, fee-for-service, etc. Although not specified in the proposed rule, by insurance type we were referring to the first distinction—the source of funding for the insurance. We found two initiatives that could provide clarity on type. The first is the "Source of Payment Typology" developed by the Public Health Data Standards Consortium (*http://www.phdsc.org/standards/payer-typology.asp*). The consortium is currently in the process of working with States to implement this typology. The other initiative is established in the Uniform Data Set (UDS) collected by HRSA (*http://www.hrsa.gov/data-statistics/health-center-data/index.html*). The information in the UDS contains several caveats, however, that make it difficult to be used by all EPs, eligible hospitals and CAHs, and it does not accommodate patients with multiple types of insurance such as those dually eligible for Medicare and Medicaid or for those with both Medicare and MediGap coverage. Many EHRs that currently report on HRSA UDS Insurance Type standards account for multiple types of insurance by maintaining separate Reporting Insurance Groups and deriving the Insurance Type data from the primary insurance company on the encounter and mappings to that Insurance Type Reporting Group. This information is documented at the patient demographic level or the patient encounter/progress note. Given the complexity of defining insurance type and attributing it to patients in an agreed upon way, we are eliminating "insurance type" from this meaningful use objective.

Comment: A minority of commenters commenting on this objective recommended that CMS remove cause of death from the objective for eligible hospitals. The most common rationale is that the coroner or medical examiner officially determines cause of death when the case is referred to them. By law, the hospital cannot declare a cause of death in these cases.

Response: When a patient expires, in the routine hospital workflow, a clinician evaluates the patient to pronounce the patient's death. The clinician typically documents in the patient's chart, the sequence of events leading to the patient's death, conducts the physical exam and makes a preliminary assessment of the cause of death. We are requiring that eligible hospitals record in the patient's EHR the clinical impression and preliminary assessment of the cause of death, and not the cause of death as stated in any death certificate issued by the Department of Health or the coroner's office.

Comment: A few commenters requested inclusion of Advanced Directives under this objective as recommended by the HIT Policy Committee.

Response: We discuss advance directives separately in this final rule under its own objective.

Comment: Several commenters recommended requiring the submission of the demographic data to CMS.

Response: Stage 1 of meaningful use seeks to ensure certified EHR technology has the capability to record demographic information and that those capabilities are utilized. We believe the information recorded for this measure is for provider use in the treatment and care of their patients and therefore should not be submitted to CMS at this time.

Comment: Commenters suggested requiring the use of the demographic data from this measure to stratify clinical quality measure reporting and

the generation of reports for patient outreach and quality initiatives.

Response: While we encourage all providers and EHR developers to work together to develop reporting from the EHR system for use in the improvement of population and public health, for purposes of becoming a meaningful EHR user in Stage 1, we only require the recording of the specified demographics.

After consideration of the public comments received, we are modifying meaningful use objective at § 495.6(d)(7)(i) of our regulations for EPs to "Record the following demographics: Preferred language, gender, race and ethnicity, and date of birth".

After consideration of the public comments received, we are modifying meaningful use objective at § 495.6(f)(6)(i) of our regulations for eligible hospitals and CAHs to "Record the following demographics: Preferred language, gender, race and ethnicity, date of birth, and date and preliminary cause of death in the event of mortality in the eligible hospital or CAH".

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare, recommended by the HIT Policy Committee and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all unique patients seen by the EP or admitted to the eligible hospital have demographics recorded as structured data.

Comment: Commenters said that this should be replaced with a count or attestation or alternatively that the threshold was too high.

Response: We are maintaining a percentage for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. However, we do reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information. In contrast to our discussion of maintaining an up-to-date problem list/medication list/medication allergy list, we believe that some demographic elements (especially race, ethnicity and language) are not as straightforward to collect as objective data elements and therefore the standard of practice for demographic data is still evolving. As we believe this measure may not be within current standard of practice, we are adopting the lower threshold of 50 percent (rather than 80 percent).

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(7)(ii) and for eligible hospitals at § 495.6(f)(6)(ii) of our regulations to "More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(c) for EPs and 45 CFR 170.304(b) for eligible hospitals and CAHs. The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period. A unique patient is discussed under the objective of CPOE.
- *Numerator:* The number of patients in the denominator who have all the elements of demographics (or a specific exclusion if the patient declined to provide one or more elements or if recording an element is contrary to state law) recorded as structured data.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital or CAH to meet this measure. Most EPs and all eligible hospitals and CAHs would have access to this information through direct patient access. Some EPs without direct patient access would have this information communicated as part of the referral from the EP who identified the service as needed by the patient. Therefore, we did not include an exclusion for this objective and associated measure.

NPRM EP/Eligible Hospital Objective: Record and chart changes in the following vital signs: height, weight and blood pressure and calculate and display body mass index (BMI) for ages 2 and over; plot and display growth charts for children 2–20 years, including BMI.

In the proposed rule, we described why we included growth charts in this objective. The reason given was that BMI was not a sufficient marker for younger children.

Comment: Over two thirds of the commenters commenting on this objective expressed concern about the applicability of the listed vital signs to all provider types and care settings.

Response: While this objective could be met by receiving this information from other providers or non-provider data sources, we recognize that the only guaranteed way for a provider to obtain this information is through direct patient interaction and that this information is not always routinely provided from the EP ordering a service because of a direct patient interaction. EPs who do not see patients 2 years or older would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We would also allow an EP who believes that measuring and recording height, weight and blood pressure of their patients has no relevance to their scope of practice to so attest and be excluded.

Comment: Several commenters stated this objective should be removed in favor of clinical quality measures addressing BMI and blood pressure as these measures serve the same purpose and to require both is to require duplicative reporting.

Response: We disagree that these two measures serve the same purpose and therefore that the measure should be eliminated in favor of clinical quality measures addressing BMI and blood pressure. The objective included here seeks to ensure that information on height, weight and blood pressure and the extractions based on them are included in the patient's record. Furthermore, the objective seeks to ensure that the data is stored in a structured format so that it can be automatically identified by certified EHR technology for possible reporting or exchanging. We also note that the clinical quality measure focuses on a smaller subset of the patient population.

After consideration of the public comments received, we are finalizing the objective for EPs at 495.6(d)(8)(i) and for eligible hospitals and CAHs at 495.6(f)(7)(i) as proposed.

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: For at least 80 percent of all unique patients age 2 and over seen by the EP or admitted to the eligible hospital,

record blood pressure and BMI; additionally, plot growth chart for children age 2 to 20.

Comment: Commenters suggested replacement of the percentage measurement with a count or attestation or alternatively that that the threshold was too high.

Response: We are retaining a percentage for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. However, we did reduce the threshold from 80 percent to greater than 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information. In addition, in contrast to the measures associated with maintaining an up-to-date problem list, an active medication list, and an active medication-allergy list, we believe that for many specialties, the current practice on vital signs may not be as well-established. We believe there may not be the same level of consensus regarding the relevance to patient care of vital signs for many specialties and the frequency with which such vital signs should be collected. Thus, for this measure, we adopt a percentage of 50 percent, rather than 80 percent.

Comment: Commenters requested clarification of the frequency and methods of recording the vital signs included in the measure.

Response: As discussed in the objective, the EP/eligible hospital/CAH is responsible for height, weight and blood pressure so we will focus our discussion on those items. First, we do not believe that all three must be updated by a provider at every patient encounter nor even once per patient seen during the EHR reporting period. For this objective we are primarily concerned that some information is available to the EP/eligible hospital/CAH, who can then make the determination based on the patient's individual circumstances as to whether height, weight and blood pressure needs to be updated. The information can get into the patient's medical record as structured data in a number of ways. Some examples include entry by the EP/eligible hospital/CAH, entry by someone on the EP/eligible hospital/CAH's staff, transfer of the information electronically or otherwise from another provider or entered directly by the patient through a portal or other means. The measure hinges on access of the information. Therefore, any EP/eligible hospital/CAH that sees/admits the patient and has access to height, weight and blood pressure information on the patient can put that patient in the numerator.

Comment: Some commenters requested clarification regarding the role of both the EP/eligible hospital/CAH and the certified EHR technology for the calculation of BMI and the plotting and displaying of growth charts. Other commenters recommended the exclusion of growth charts for certain patients and care settings. Another commenter also expressed the desire for the exclusion of growth charts for patients over the age of 18, inpatient care settings and more specifically, non-pediatric inpatient care settings.

Response: We believe a clarification is in order about which of the listed vital signs are data inputs to be collected by the EP/eligible hospital/CAH and which are calculations made by the certified EHR technology. The only information required to be inputted by the provider is the height, weight and blood pressure of the patient. The certified EHR technology will calculate BMI and the growth chart if applicable to patient based on age. As this requirement imposes no duty or action on the provider, we see no reason to limit its availability to any EP, eligible hospital, or CAH based on setting or other consideration. Concerns on presentation and interface are best left to designers of certified EHR technology and users. Finally, as certified EHR technology is able to automatically generate BMI and the growth chart if height and weight are entered as structured data we see no reason to include BMI and growth chart in the measure. We therefore will limit the final measure to data requiring provider data entry points.

Comment: A few commenters suggested that "reported height" by the patient should be acceptable when measurement is not appropriate such as in the case of severe illness.

Response: We agree and would allow height self-reported by the patient to be used.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at 495.6(d)(8)(ii) and for eligible hospitals § 495.6(f)(7)(ii) of our regulations to "For more than 50 percent of all unique patients age 2 and over seen by the EP or admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(f). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the percentage is based on patient records that are maintained using certified EHR technology. To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients age 2 or over seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period. A unique patient is discussed under the objective of CPOE.
- *Numerator:* The number of patients in the denominator who have at least one entry of their height, weight and blood pressure are recorded as structure data.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure. As addressed in other objectives and in comment response, an EP who sees no patients 2 years old or younger would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We would also allow an EP who believes that all three vital signs of height, weight and blood pressure have no relevance to their scope of practice to so attest and be excluded. However, we believe this attestation and exclusion from recording height, weight, and blood pressure does not hold for other patient specific information collection objectives, like maintaining an active medication allergy list. We do not believe that any EP would encounter a situation where the patient's active medication and allergy list is not pertinent to care and therefore would be outside of the scope of work for an EP. We believe the exclusion based on EP determination of their scope of practice for the record vital signs objective, as written in Stage 1, should be studied for relevance in further stages. We do not believe eligible hospitals or CAHs would ever only have a patient population for patients 2 years old or younger or that these vital signs would have no relevance to their scope of practice. Therefore, we do not include an exclusion for eligible hospitals or CAHs.

NPRM EP/Eligible Hospital Objective: Record smoking status for patients 13 years old or older

In the proposed rule, we explained that we believe it is necessary to add an age restriction to this objective as we do not believe this objective is applicable to patients of all ages and there is no consensus in the health care community as to what the appropriate cut off age may be. We encouraged comments on whether this age limit should be lowered or raised. We received many comments on the age limit and address them below.

Comment: Several commenters requested a different age limitation. Commenters suggested ages anywhere between 5 years old up to 18 years old.

Response: For the purposes of this objective and for meaningful use, our interest is focused on when a record of smoking status should be in every patient's medical record. Recording smoking status for younger patients is certainly not precluded. We do believe there would be situations where an EP/eligible hospital/CAH's knowledge about other risk factors would indicate that they should inquire about smoking status if it is unknown for patients under 13 years old. However, in order to accurately measure and thereby assure meaningful use, for this objective we believe that the age limit needs to be high enough so that the inquiry is appropriate for all patients. Therefore, we are maintaining the age limitation at 13 years old or older.

Comment: Some commenters suggested expanding smoking status to any type of tobacco use.

Response: While we agree that an extended list covering other types of tobacco use may provide valuable insight for clinical care for certified EHR technology ONC has adopted the CDC's NHIS standard recodes for smoking status. This will provide a standard set of questions across providers and standardize the data. The extended list does not make the collection of multiple survey questions clear. For example, a patient may be a current tobacco user as well as a smoker. For these reason in Stage 1 we will use the standards adopted by ONC for certified EHR technology at 45 CFR 170.302(g). For future stages, we will review this measure for possible inclusion of other questions. This is a minimum set. We do not intend to limit developers of EHR technology from creating more specific fields or to limit EPs/eligible hospitals/CAHs from recording more specific information.

Comment: We also received comments requesting that second-hand smoking be included in the objective for children and adolescents.

Response: Including second-hand smoking introduces much more variability into the objective as to what constitutes a level of exposure and difficulty in measuring it successfully with different age limits to different aspects. For instance, how much exposure is acceptable for a given age and how is such exposure determined? How would these differing requirements be accounted for by certified EHR technology? As with the change from smoking status to tobacco use, we believe this introduces an unacceptable level of complexity for Stage 1 of meaningful use. For Stage 1 of meaningful use we are not adding second hand smoke exposure to this objective. However, we remind EPs, eligible hospitals and CAHs that nothing about the criteria for meaningful use prevents them from working with their EHR developer to ensure that their EHR system meets their needs and the needs of their patient population. We encourage all EPs, eligible hospitals and CAHs to critically review their implementation in light of their current and future needs both to maximize their own value and to prepare for future stages of meaningful use.

Comment: We received comments asking at what frequency the information must be recorded and whether the information can be collected by support staff.

Response: We clarify that this is a check of the medical record for patients 13 years old or older. If this information is already in the medical record available through certified EHR technology, we do not intend that an inquiry be made every time a provider sees a patient 13 years old or older. The frequency of updating this information is left to the provider and guidance is provided already from several sources in the medical community. The information could be collected by any member of the medical staff.

Comment: We received a number of comments recommending either removing this objective to record smoking status from the HIT functionality objectives or removing the smoking measure from the core clinical quality measures as these measures serve the same purpose and to require both is to require duplicative reporting.

Response: We disagree that these two measures serve the same purpose and therefore only one should be included. The objective included here seeks to ensure that information on smoking status is included in the patient's record. Furthermore, that the information is stored in a structured format so that it can automatically be identified by certified EHR technology as smoking status for possible reporting or exchanging. We also note that the clinical quality measure only focuses on patients 18 years or older, while the objective focuses on patients 13 years or older. In addition, many quality measures related to smoking are coupled with follow-up actions by the provider such as counseling. We consider those follow-up actions to be beyond the scope of what we hope to achieve for this objective for Stage 1 of meaningful use.

After consideration of the public comments received, we are finalizing the meaningful use objective for EPs at § 495.6(d)(9)(i) and for eligible hospitals at § 495.6(f)(8)(i) of our regulations as proposed.

We include this objective in the core set as it is integral to the initial or on-going management of a patient's current or future healthcare and would give providers the necessary information to make informed clinical decisions for improved delivery of patient care.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital have "smoking status" recorded.

In the proposed rule, discussion of this measure referenced other sections exclusively.

Comment: We received comments recommending alternative thresholds for this measure. Commenters provided thresholds ranging from anything greater than zero to 60 percent in stage 1.

Response: In the proposed rule, we established a consistent threshold for measures not requiring the exchange of information. For the final rule, (other than up-to-date problem list, active medication list and active medication-allergy list), we have lowered the threshold associated with these measures to 50 percent. In our discussion of the objective, we noted many concerns by commenters over the appropriate age at which to inquire about smoking status. There were also considerable differences among commenters as to what the appropriate inquiry is and what it should include. Due to these concerns, we do not believe this objective and measure fit into the threshold category described under up-to-date problem lists and therefore we adopt a 50 percent (rather than an 80 percent) threshold for this measure. After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(9)(ii) and for eligible hospitals at § 495.6(f)(8)(ii) of

our regulations to "More than 50 percent of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have smoking status recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(g). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the percentage is based on patient records that are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

• *Denominator:* Number of unique patients age 13 or older seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period. A unique patient is discussed under the objective of maintaining an up-to-date problem list.

• *Numerator:* The number of patients in the denominator with smoking status recorded as structured data.

• *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure. As addressed in other objectives, EPs, eligible hospitals or CAHs who see no patients 13 years or older would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. Most EPs and all eligible hospitals and CAHs would have access to this information through direct patient access. Some EPs without direct patient access would have this information communicated as part of the referral from the EP who identified the service as needed by the patient. Therefore, we did not include an exclusion based on applicability to scope of practice or access to the information for this objective and associated measure.

NPRM EP/Eligible Hospital Objective: Record advance directives.

In the proposed rule, we discussed this objective, but did not propose it as a requirement for demonstrating meaningful use, for a number of reasons, including: (1) It was unclear whether the objective would be met by indicating that an advance directive exists or by including the contents of the advance directive; (2) the objective seems relevant only to a limited and undefined patient population when compared to the patient populations to which other objectives of Stage 1 of meaningful use apply; and (3) we believe that many EPs would not record this information under current standards of practice. Dentists, pediatricians, optometrists, chiropractors, dermatologists, and radiologists are just a few examples of EPs who would require information about a patient's advance directive only in rare circumstances.

Comment: We received several comments including a comment from the HIT Policy Committee that we should include advance directives in the final rule. The HIT Policy Committee clarified that this would be an indication of whether a patient has an advanced directive. Furthermore, they recommend limiting this measure to patients 65 and older. We received other comments that said this should be a requirement for eligible hospitals. Other commenters reported that having this information available for the patient would allow eligible hospitals to make decisions that were better aligned with the patient's expressed wishes.

Response: In the proposed rule, we said that confusion as to whether this objective would require an indication of the existence of an advanced directive or the contents of the advance directive itself would be included in certified EHR technology was one of the reasons for not including the objective in Stage 1 of meaningful use. We expressed concerns that the latter would not be permissible in some states under existing state law. As commenters have clarified that advance directives should be just an indication of existence of an advance directive and recommended a population to apply the measure to, we reinstate this objective for eligible hospitals and CAHs. We believe that the concern over potential conflicts with state law are alleviated by limiting this to just an indication. We also believe that a restriction to a more at risk population is appropriate for this measure. By restricting the population to those 65 years old and older, we believe we focus this objective appropriately on a population likely to most benefit from compliance with this objective and its measure. This objective is in the menu set so if an eligible hospital or CAH finds they are unable to meet it then can defer it. However, we believe many EPs would not record this information under current standards of practice. Dentists, pediatricians, optometrists, chiropractors, dermatologists, and radiologists are just a few examples of EPs who would only require information about a patient's advance directive in rare circumstances. For other meaningful use objectives, we have focused our exclusions on rare situations, which would not be the case for this objective. Therefore, we do not include this objective for EPs.

After consideration of the public comments received, we are including this meaningful use objective for eligible hospitals and CAHs at § 495.6(g)(2)(i) of our regulations as "Record whether a patient 65 years old or older has an advanced directive as structured data ".

NPRM EP/Eligible Hospital Measure: N/A.

While we did not receive specific percentage recommendations from commenters, this objective is the recording of a specific data element as structured data in the patient record. This is identical to other objectives with established measures such as, recording vital signs, recording demographics and recording smoking status. Therefore, we adopt the measure format and the lower threshold (50 percent) from those objectives. We also believe that this information is a level of detail that is not practical to collect on every patient admitted to the eligible hospital's or CAH's emergency department, and therefore, have limited this measure only to the inpatient department of the hospital.

In the final rule, this meaningful use measure for eligible hospitals at § 495.6(g)(2)(ii) of our regulations: "More than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) have an indication of an advance directive status recorded as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.306(h). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the percentage is based on patient records that are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

• *Denominator:* Number of unique patients age 65 or older admitted to an eligible hospital's or CAH's inpatient department (POS 21) during the EHR

reporting period. A unique patient is discussed under the objective of CPOE.

- *Numerator:* The number of patients in the denominator with an indication of an advanced directive entered using structured data.
- *Threshold:* The resulting percentage must be more than 50 percent in order for eligible hospital or CAH to meet this measure. An exclusion, as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices, would apply to an eligible hospital or CAH who admits no patients 65 years old or older during the EHR reporting period.

NPRM EP/Eligible Hospital Objective: Incorporate clinical lab-test results into EHR as structured data.

In the proposed rule, we defined structured data as data that has a specified data type and response categories within an electronic record or file. We have revised that definition for the final rule as discussed below.

Comment: Some commenters requested clarification on what constitutes structured data.

Response: The distinction between structured data and unstructured data applies to all types of information. Structured data is not fully dependent on an established standard. Established standards facilitate the exchange of the information across providers by ensuring data is structured in the same way. However, structured data within certified EHR technology merely requires the system to be able to identify the data as providing specific information. This is commonly accomplished by creating fixed fields within a record or file, but not solely accomplished in this manner.

After consideration of the public comments received, we finalize the meaningful use objective or EPs at § 495.6(e)(2)(i) and eligible hospitals and CAHs at § 495.6(g)(3)(i) as proposed.

NPRM EP/Eligible Hospital Measure: At least 50 percent of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.

In the proposed rule, we identified this objective and associated measure as dependent on electronic exchange and therefore requiring special consideration in establishing the threshold. We said that we are cognizant that in most areas of the country, the infrastructure necessary to support such exchange is still being developed. Therefore, we stated our belief that 80 percent is too high a threshold for the Stage 1 criteria of meaningful use. As an alternative, we proposed 50 percent as the threshold based on our discussions with EHR vendors, current EHR users, and laboratories. We then invited comment on whether 50 percent is feasible for the Stage 1 criteria of meaningful use. Finally, we indicated that we anticipate raising the threshold in future stages of meaningful use as the capabilities of HIT infrastructure increase. We received several comments on the appropriateness of this 50 percent threshold and discuss them in the comment and response section below.

Comment: Commenters requested clarification as to whether the measure includes only electronic exchange of information with a laboratory or if it also includes manual entry.

Response: We encourage every EP, eligible hospital and CAH to utilize electronic exchange of the results with the laboratory based on the certification and standards criteria in the 45 CFR 170.302(h). If results are not received in this manner, then they are presumably received in another form such as fax, telephone call, mail, etc. These results then must be incorporated into the patient's medical record in some way. We encourage that this way use structured data; however, that raises the concerns about the possibility of recording the data twice; for example scanning the results and then entering the results as structured data. Telephoned results could be entered directly. We also recognize the risk of entry error, which is why we highly encourage the electronic exchange of the results with the laboratory, instead of manual entry through typing, option selecting, scanning or other means. Reducing the risk of entry error is one of the primary reasons we lowered the measure threshold for Stage 1 during which providers are changing their workflow processes to accurately incorporate information into EHRs through either electronic exchange or manual entry. However, for this measure, we do not limit the EP, eligible hospital or CAH to only counting structured data received via electronic exchange, but count in the numerator all structured data. By entering these results into the patient's medical record as structured data, the EP, eligible hospital or CAH is accomplishing a task that must be performed regardless of whether the provider is attempting to demonstrate meaningful use or not. We believe that entering the data as structured data encourages future exchange of information.

Comment: A majority of commenters commenting on this measure believe the proposed 50 percent threshold is too high. Suggestions for alternative thresholds ranged from more than zero to eighty percent. Some commenters suggested that the percentage calculation be replaced with a numeric count.

Response: We are finalizing a percentage calculation for the reasons discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives. We based the 50 percent threshold in the proposed rule on our discussions with EHR vendors, current EHR users, and laboratories and specifically requested comment on whether the 50 percent threshold was feasible. While only a small number of commenters commented on this objective, those that did were overwhelming in favor of either a count or a lower threshold. EPs especially were concerned with our inability to impose any requirements on laboratory vendors. Based on the comments received, we have modified our assessment of the current environment for incorporating lab results into certified EHR technology, and believe that a threshold lower than fifty percent is warranted. We want to create a threshold that encourages, but does not require, the electronic exchange of this information and commenters indicated that 50 percent was too high given the current state of electronic exchange of lab results. Therefore, we lower the threshold to 40 percent.

Comment: Commenters requested clarification on what types of laboratories could generate the lab results.

Response: The focus of this objective is to get as many lab results as possible into a patient's electronic health record as structured data. Limiting the objective to a specific type of laboratory would not further this objective so therefore we leave it open to all lab tests and laboratories.

Comment: Several commenters expressed concern regarding the financial burden of establishing lab interfaces, especially for smaller hospitals and practices.

Response: The ability to exchange information is a critical capability of certified EHR technology. Exchange between lab and provider and provider to provider of laboratory results reduces errors in recording results and prevents the duplication of testing. Therefore, we continue to include this objective within Stage 1 of meaningful use although as noted above the measure

does not rely on the electronic exchange of information between the lab and the provider.

Comment: We received comments requesting a listing of laboratory tests with results that are in a numerical or positive/negative format.

Response: We consider it impractical to develop an exhaustive list of such tests. Moreover, we believe further description of these tests is unnecessary. It should be self-evident to providers when a test returns a positive or negative result or a result expressed in numeric characters. In these case, the results should be incorporated into a patient's EHR as structured data.

Comment: Several commenters pointed out that many current EHR vendors do not support the use of LOINC® codes and there is no federal regulatory requirement for labs to transmit using this code set or for that matter, any structured code set.

Response: Standards such as LOINC® codes are included in the ONC final rule. However, this measure requires incorporation of lab test results as structured data, but does not include a requirement for transmission or electronic receipt of the results using certified EHR technology.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(2)(ii) and eligible hospitals at § 495.6(g)(3)(ii) of our regulations to "More than 40 percent of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are in either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(h). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices, the percentage is based on labs ordered for patients whose records are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of lab tests ordered during the EHR reporting period by the EP or authorized providers of the eligible hospital or CAH for patients admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 & 23) whose results are expressed in a positive or negative affirmation or as a number.
- *Numerator:* The number of lab test results whose results are expressed in a positive or negative affirmation or as a number which are incorporated as structured data.
- *Threshold:* The resulting percentage must be more than 40 percent in order for an EP, eligible hospital, or CAH to meet this measure.

If an EP orders no lab tests whose results are either in a positive/negative or numeric format during the EHR reporting period they would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We do not believe any eligible hospital or CAH would order no lab tests whose results are either in a positive/negative or numeric format during the EHR reporting period.

NPRM EP/Eligible Hospital Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, and outreach.

Comment: A few commenters recommended eliminating this requirement because they believe it is redundant of clinical quality reporting.

Response: We disagree that this is redundant of clinical quality reporting. Clinical quality reporting does not guarantee usability for all the purposes in the objective. One example of such a use is a provider could not only generate list of patients with specific conditions, but could stratify the output using other data elements in the certified EHR technology that are entered as structured data. The lists could also be utilized at an aggregate level for purposes of research into disparities, which could result in targeted outreach efforts.

Comment: Some commenters requested that if we finalize our proposal to only require one report that we change the "and" in the objective to "or".

Response: We are finalizing our measurement of only requiring one report for Stage 1 of meaningful use and will change "and" to "or". However, we note that all measures will be reconsidered in later stages of meaningful use and multiple reports could be required in those stages.

Comment: We received a few comments requesting the removal of the terms "reduction of disparities" and "outreach" as there are no actionable items or measures associated with the term. We also received comments that the measurement should include the requirement that the lists be stratified by race, ethnicity, preferred language, and gender for initiatives targeted at reducing disparities.

Response: We disagree that actions to reduce disparities or conduct outreach could not be guided by this report, especially if stratified and aggregated reports of many providers are combined within large organizations or among organizations. While we do not require such stratification or aggregation or specify specific uses, that does not preclude them.

Comment: Some commenters requested clarification of the term specific condition.

Response: Specific conditions are those conditions listed in the active patient problem list.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(e)(3)(i) and for eligible hospitals at § 495.6(g)(4)(i) of our regulations to "Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach".

NPRM EP/Eligible Hospital Measure: Generate at least one report listing patients of the EP or eligible hospital with a specific condition.

In the proposed rule, we said that an EP or eligible hospital is best positioned to determine which reports are most useful to their care efforts. Therefore, we do not propose to direct certain reports be created. However, in order to ensure the capability can be utilized we proposed to require EPs and hospitals to attest to the ability of the EP or eligible hospital to create a report listing patients by specific condition and to attest that they have actually done so at least once. We received comments on this and address them and any revisions to the proposed rule in the comment and response section below.

Comment: Commenters requested clarification that only one report per EHR reporting period is required to meet the measure.

Response: Yes, only one report in required for any given EHR reporting period. The report could cover every patient whose records are maintained using certified EHR technology or a subset of those patients at the discretion of the EP, eligible hospital or CAH.

Comment: A few commenters suggested the measure should be

expanded to require submission of the report to CMS or the States or to the local health department.

Response: Submission raises many questions about what types of information can be sent to different entities, how the information is used, patient consent for sending the information, and many of the issues, which add considerable complexity to this meaningful use objective. Therefore, we are not requiring submission of the report to CMS, the States or local health departments for Stage 1 of meaningful use. We do note that this is one of the objectives for which a State can submit modifications to CMS for approval.

Comment: Several commenters requested a list of condition categories, a model report or the core data elements required to satisfy the measure.

Response: As stated in the rule, we believe an EP, eligible hospital, or CAH is best positioned to determine which reports are most useful to their care efforts. Therefore, we do not propose to direct certain reports be created.

Comment: For eligible hospitals, commenters stated that the analysis of patient data is derived from post-discharge coding of diagnosis and procedures and not problem lists.

Response: We do not specify that the list is limited to being generated from the data problem list; rather, for the definition of conditions we refer providers to those conditions contained in the problem list.

Comment: One commenter stated that for privacy and confidentiality reasons, patients should be allowed to opt out of any provider outreach initiatives.

Response: Stage 1 of meaningful use does not require the submission of these reports to other entities; rather, we require that the provider generate these reports for their own use. We therefore do not believe the generation of such reports raises privacy and confidentiality concerns. We understand, however, that some patients may have concerns about such lists being exchanged with others and will consider such concerns should future meaningful use requirements focus on exchange of these reports.

After consideration of the public comments received, we are finalizing the meaningful use measure for EPs at § 495.6(e)(3)(ii) and for eligible hospitals and CAHs at § 495.6(g)(4)(ii) of our regulations as proposed.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(i). The ability to calculate the measure is included in certified EHR technology.

As this measure relies on data contained in certified EHR technology the list would only be required to include patients whose records are maintained using certified EHR technology as discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives.

We do not believe anything included in this objective or measure limit any EP, eligible hospital or CAH from completing the measure associated with this objective, therefore, we do not include an exclusion.

NPRM EP Objective: Report ambulatory quality measures to CMS (or, for EPs seeking the Medicaid incentive payment, the States).

Specific comments on the quality measures are discussed in section II.A.3 of this final rule.

We are finalizing this meaningful use objective at § 495.6(d)(10)(i) of our regulations "Report ambulatory clinical quality measures to CMS (or, for EPs seeking the Medicaid incentive payment, the States)" to better align with the descriptions in section II.A.3.

In response to our revised requirements for meeting meaningful use, we are including this objective in the core set. Section 1848 (o)(2)(A)(iii) of the Act specifically includes submitting clinical quality measures in meaningful use for EPs. Section 1903(t)(6)(D) of the Act also anticipates that the demonstration of meaningful use may include quality reporting to the States for the Medicaid program.

NPRM Eligible Hospital Objective: Report ambulatory quality measures to CMS (or, for eligible hospitals seeking the Medicaid incentive payment, the States).

We make a technical correction to this objective from the proposed rule to ensure that it is clear to the public that we were referring to hospital quality measures.

Specific comments on the quality measures are discussed in section II.A.3 of this final rule.

After consideration of the public comments received, we are finalizing this meaningful use objective at § 495.6(d)(9)(i) to account for our technical correction and to better align with the descriptions in section II.A.3 as "Report hospital clinical quality measures to CMS (or, for eligible hospitals seeking the Medicaid incentive payment, the States)".

In response to our revised requirements for meeting meaningful use, we are including this objective in the core set. Section 1886 (n)(3)(A)(iii) of the Act specifically includes submitting clinical quality measures in meaningful use for eligible hospitals and CAHs. Section 1903(t)(6)(D) of the Act also anticipates that the demonstration of meaningful use may include quality reporting to the States for the Medicaid program.

NPRM EP Measure: For 2011, an EP would provide the aggregate level data for the numerator, denominator, and exclusions through attestation as discussed in section II.A.3 of this final rule. For 2012, an EP would electronically submit the measures that are discussed in section II.A.3. of this final rule.

Specific comments on the quality measures themselves are discussed in section II.A.3 of this final rule.

After consideration of the public comments received, we are finalizing this meaningful use objective at § 495.6(d)(10)(ii) as proposed.

NPRM Eligible Hospital Measure: For 2011, an eligible hospital or CAH would provide the aggregate level data for the numerator, denominator, and exclusions through attestation as discussed in section II.A.3 of this final rule. For 2012, an eligible hospital or CAH would electronically submit the measures as discussed in section II.A.3. of this final rule. Specific comments on the quality measures are discussed in section II.A.3 of this final rule. After consideration of the public comments received, we are finalizing this meaningful use objective at 495.6(f)(9)(ii) as proposed.

NPRM EP Objective: Send reminders to patients per patient preference for preventive/follow-up care.

In the proposed rule, we described patient preference as the patient's choice between internet based delivery or delivery not requiring internet access. We are revising that description based on comments as discussed below.

Comment: Commenters have pointed out that requirements to accommodate reasonable requests by individuals to receive communications by means other than the means preferred by the provider already exist under HIPAA at 45 CFR 164.522(b).

Response: As we stated in the proposed rule, patient preference refers to the patient's preferred means of transmission of the reminder from the provider to the patient, and not inquiries by the provider as to whether the patient would like to receive reminders. In the proposed rule, we had proposed that patient preference be limited to the choice between internet based or non-internet based. In order to avoid unnecessary confusion and duplication of requirements, EPs meet

the aspect of "per patient preference" of this objective if they are accommodating reasonable requests as outlined in 45 CFR 164.522(b), which are the guidance established under HIPAA for accommodating patient requests.

After consideration of the public comments received, we are finalizing the meaningful use objective at § 495.6(e)(4)(i) of our regulations as proposed.

NPRM EP Measure: Reminder sent to at least 50 percent of all unique patients seen by the EP or admitted to the eligible hospital that are 50 and over.

For the final rule, we are changing the measure to recognize that this is an EP only objective. Therefore, we make the technical correction of striking "or admitted to the eligible hospital".

Comment: Commenters indicated that "practice management systems" or "patient management systems" are commonly used for this function and that integrating them into certified EHR technology would be expensive and time consuming for little value in return.

Response: While we disagree with commenters who suggest there is little to no value in having information about reminders sent to patients available across all the systems used by the provider, we do not assert that such integration of systems must be in place to meet this measure. ONC provides for a modular approach that would allow these systems to be certified as part of certified EHR technology.

Comment: Some commenters pointed out that many patients seen during an EHR reporting period will not be sent a reminder during that same period. Commenters said this is especially true for the 90-day EHR reporting period, but for some services could be true of the full year EHR reporting period as well. Other commenters also pointed out that reminders are not limited to the older population and that children especially may require many reminders on immunizations.

Response: We agree with commenters that many patients not seen during the EHR reporting period would benefit from reminders. As the action in this objective is the sending of reminders, we base the revised measure on that action. This focus is supported by numerous public comments, including those by the HIT Policy Committee. Therefore, we are changing the requirement to account for all patients whose records are maintained using certified EHR technology regardless of whether they were seen by the EP during the EHR reporting period. This greatly expanded denominator caused us to reconsider both our threshold and the age limit. In order to increase the probability that a patient whose records are maintained in certified EHR technology will be eligible for a reminder we change the age limit of the population to 65 years old or older or 5 years old or under. We believe that older patient populations are more likely to have health statuses that will indicate the need for reminders to be sent and this segment of the population is have higher rates of chronic diseases which will require coordination in preventive care such as vaccine reminders. Likewise, the 5 years old and under population will require a multitude of childhood vaccinations such as influenza and will benefit from reminders. However, we do not believe that changing the age limit of the affected population will result in 50 percent of every patient whose records maintained in certified EHR technology requiring a reminder during the EHR reporting period. This is especially true for the first payment year when the EHR reporting period is only 90 days. We are also concerned about the variability among specialists' scopes of practice that may affect the number of patients in the denominator for which a reminder is appropriate. Therefore, we lower the threshold to 20 percent. The EP has the discretion to determine the frequency, means of transmission and form of the reminder limited only by the requirements of 45 CFR 164.522(b) and any other applicable federal, state or local regulations that apply to them. After consideration of the public comments received, we are modifying the meaningful use measure at § 495.6(e)(4)(ii) to "More than 20 percent of all patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period".

We further specify that in order to meet this objective and measure, an EP must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(d). The ability to calculate the measure is included in certified EHR technology.

As noted previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, the denominator is based on patients whose records are maintained using certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients 65 years old or older or 5 years older or younger.
- *Numerator:* The number of patients in the denominator who were sent the appropriate reminder.
- *Threshold:* The resulting percentage must be more than 20 percent in order for an EP to meet this measure.

As addressed in other objectives and in comment responses, if an EP has no patients 65 years old or older or 5 years old or younger with records maintained using certified EHR technology that EP is excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP/Eligible Hospital Objective: Document a progress note for each encounter. In the proposed rule, we discussed this objective, but did not propose it for Stage 1 of meaningful use. We noted our belief that documentation of progress notes is a medical-legal requirement and a component of basic EHR functionality, and is not directly related to advanced processes of care or improvements in quality, safety, or efficiency.

Comment: We received a limited number of comments regarding our decision not to include documentation of progress notes as an objective. The commenters generally fell into three categories: Those who supported inclusion of this objective in the final rule, those who supported its inclusion only if certain caveats are met and those who supported our proposal not to include it as an objective for Stage 1 of meaningful use. Concerns raised by those supporting the inclusion of this objective included the possibility that an EP may keep paper progress notes in conjunction with use of certified EHR technology as prescribed by Stage 1 of meaningful use and that such a choice by EPs would create the possibility of handwriting illegibility, loss of information and reduced access to health information by both patients and other providers. Another concern raised is that if the objective is not included in the criteria for the definition of meaningful use designers of EHR technology will not include the function in their products. The advocates in the second category agree with the above, but only support inclusion with certain caveats. Some of these caveats include preserving the option of transcription, voice recognition software, and direct entry by an EP or any combination of these. Another caveat is that progress notes not be required to be entered as structured data. The third category supports exclusion of progress notes as an objective for two fundamentally different reasons. Some commenters

supported exclusion because they believe that the volume of objectives was already too high for Stage 1 of meaningful use and therefore opposed anything that would increase the volume.

Other commenters agree with our proposal that progress notes is already a fundamental part of current EHR products and did not represent a move that advances the use of EHRs.

Response: We predicated our discussion in the proposed rule on the assumption that progress notes are a component of basic EHR functionality. We still believe this is the case and have not received evidence to the contrary. However, we failed to clearly articulate the ramifications of our belief. Our view continues to be that an EP who incorporates the use of EHRs into a practice and complies with meaningful use criteria is unlikely to maintain separate paper progress notes outside of the EHR system. We believe that the potential disruption in workflow of the efforts to merge paper progress notes with the other records in certified EHR technology in order to have a complete medical record far outweighs the burden of electronically capturing progress notes. Moreover, we continue to believe this is a highly unlikely scenario. As with any meaningful use objective, it is important to have clear, definitive definitions. However, our observations of discussions held in public forums by the medical community and review of literature have led us to conclude that it not possible to provide a clear, definitive definition of a progress note at this time. We note that commenters recommending the documentation of a progress note be included as an objective did not attempt to define the term. Nor did commenters suggest an associated measure. We continue to believe that there is insufficient need and upon review believe there is insufficient consensus regarding the term progress note to include this objective for Stage 1 of meaningful use.

After consideration of the public comments received, we do not include this meaningful use objective in the final rule.

NPRM EP/Eligible Hospital Measure: N/A.

NPRM EP Objective: Implement five clinical decision support rules relevant to specialty or high clinical priority, including for diagnostic test ordering, along with the ability to track compliance with those rules.

NPRM Eligible Hospital Objective: Implement 5 clinical decision support rules related to a high priority hospital condition, including diagnostic test ordering, along with the ability to track compliance with those rules.

First, we make a technical correction. On page 1856 of the proposed rule, we described this objective for eligible hospitals as "Implement five clinical decision support rules *relevant to specialty or high clinical priority,* including for diagnostic test ordering, along with the ability to track compliance with those rules." The underlined language was inappropriately carried over from the EP objective in this instance and in the regulation text. The table contained our intended language of "Implement 5 clinical decision support rules related to a high priority hospital condition, including diagnostic test ordering, along with the ability to track compliance with those rules." Many commenters pointed this discrepancy out to us and we appreciate their diligence.

Comment: Nearly half of the commenters mentioning clinical decision support suggested that the term needed additional clarification. Some commenters said that the term was too vague and open to interpretation while others said it was too specific. Other commenters provided recommendations on what a clinical decision support rule should mean or which elements it should include. These were evidence-based medicine templates, decision trees, reminders, linked online resources, scientific evidence, and consensus.

Response: In the proposed rule, we described clinical decision support as HIT functionality that builds upon the foundation of an EHR to provide persons involved in care processes with general and person-specific information, intelligently filtered and organized, at appropriate times, to enhance health and health care. We purposefully used a description that would allow a provider significant leeway in determining the clinical decision support rules that are more relevant to their scope of practice and benefit their patients in the greatest way. In the proposed rule, we asked providers to relate the rules they select to clinical priorities and diagnostic test ordering. We do not believe that adding a more limiting description to the term clinical decision support would increase the value of this objective. We believe that this determination is best left to the provider taking into account their workflow and patient population.

Comment: Several commenters objected to the requirement of five clinical decision support rules when the HIT Policy Committee only recommended one. Others disagreed with our proposed assertion that most EPs would report on at least five clinical quality measures from section II.A.3 of the proposed rule and eligible hospitals will all report on at least five.

Response: We accept the argument that there is value in focusing initial CDS efforts on a single CDS rule in order to get it right the first time and lay the foundation for future, broader CDS implementation. This will help to prevent the unintended negative consequences associated with poorly implemented CDS systems when providers have attempted to do too much too soon.

We agree that the appropriate balance is to require some degree of meaningful use of CDS in Stage 1 without overburdening providers with too many areas to focus on at once. Since CDS is one area of health IT in which significant evidence exists that it can have a substantial positive impact on the quality, safety and efficiency of care delivery, it is important that it be included as a core objective with this more limited expectation. That requirement will assure that all meaningful users have taken the first steps in CDS implementation but allow them to focus as necessary on a single high-priority area at the outset in order to ensure that they can devote the appropriate level of attention to their first CDS priority. We anticipate that this will set the foundation for much more expansive CDS support in the near future.

Comment: A commenter inquired if modification of the clinical decision support tool negates the EHR's certification status.

Response: We believe this is a question on certification status and is outside of the scope of this rule. ONC discusses what would affect Certified EHR Technology's certified status in their final rule (75 FR 36157) entitled "Establishment of the Temporary Certification Program for Health Information Technology".

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at 495.6(d)(11)(i) to "Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance with that rule."

After consideration of public comments received, we are modifying the meaningful use objective for eligible hospitals and CAHs at § 495.6(f)(10)(i) of our regulations as "Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule."

We believe that clinical decision support is one of the most common tools that uses the information collected as structured data included in the core set and therefore also include clinical decision support in the core as the information needed to support it are already included in the core set.

NPRM EP/Eligible Hospital Measure: Implement five clinical decision support rules relevant to the clinical quality metrics the EP/Eligible Hospital is responsible for as described further in section II.A.3. of this final rule.

In the proposed rule, we said that clinical decision support at the point of care is a critical aspect of improving quality, safety, and efficiency. Research has shown that decision support must be targeted and actionable to be effective, and that "alert fatigue" must be avoided. Establishing decision supports for a small set of high priority conditions, ideally linked to quality measures being reported, is feasible and desirable. Meaningful use seeks to ensure that those capabilities are utilized.

Comment: Commenters, both in the requests for clarification of the term clinical decision support and explicitly in response to this measure, expressed concern about the linkage to a particular quality measure.

Response: We agree that such linkage puts constraints on the provider and eliminates many types of clinical decision support rules that may be beneficial. Therefore, we revise this measure to require that at least one of the five rules be related to a clinical quality measure, assuming the EP, eligible hospital or CAH has at least one clinical quality measure relevant to their scope of practice. However, we strongly encourage EPs, eligible hospitals and CAHs to consider the clinical quality measures as described in section II.A.3 when deciding which additional rules to implement for this measure.

Comment: Several commenters, including the HIT Policy Committee, recommended that we focus at least one clinical decision support rule on efficiency of care.

Response: In light of decision to limit the objective to one clinical decision support rule, we do not believe that it is appropriate to further to link that rule to specific requirements and therefore give the EP, eligible hospital or CAH discretion on what to focus the clinical decision support rule used to satisfy this measure.

Comment: A few commenters asked for clarification of how the "* * * with the ability to track compliance with those rules" language of the proposed objective for clinical decision support rules relates to the associated measures.

Response: While an integral part of the objective and certified EHR technology, we did not include this aspect of the objective in the measure for Stage 1 of meaningful use. An EP, eligible hospital, or CAH is not required to demonstrate to CMS or the States its compliance efforts with the CDS recommendations or results for Stage 1 either at initial attestation or during an subsequent review of that attestation.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(11)(ii) and for eligible hospitals and CAHs at § 495.6(g)(10)(ii) to "Implement one clinical decision support rule.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(e) for EPs and 45 CFR 170.306(c). The ability to calculate the measure is included in certified EHR technology.

Given the added flexibility added to this measure in the final rule, we do not believe that any EP, eligible hospital, or CAH would be in a situation where they could not implement one clinical decision support rules as described in the measure. Therefore, there are no exclusions for this objective and its associated measure.

NPRM EP/Eligible Hospital Objective: Submit claims electronically to public and private payers.

Comment: Over three quarters of those commenting on this objective recommended that it be eliminated for various reasons. The majority of the other commenters requested a modification. Reasons given are:

—Electronic claims submission is already covered under HIPAA;
—Electronic claims submission is not part of traditional EHR technology;
—Billing systems would have to be certified adding to cost and burden of compliance with meaningful use even though when electronic claims submission for Medicare is already in place for all by the very smallest of providers;
—Electronic claims submission falls outside of the scope of the statutory mandate given by Congress to implement the HITECH legislation to improve care delivery through broad scale adoption and utilization of Electronic Health Record technologies. This function does not impact the quality of care delivered and relies on product components that are traditionally part of practice management systems;
—Private payers may customize the HIPAA-recognized standard transactions, which limits the ability of practices to obtain accurate information prior to receiving an Explanation of Benefits based on the actual services provided and negates many of the benefits of having standardized transactions;
—Workers' compensation and auto insurers do not accept electronic claims; and
—Many providers use clearinghouses and they requested that the burden of electronic submission be shifted to the clearinghouse.

Response: In our proposed rule, we specifically cite that the existence of standard transactions available under HIPAA for submitting claims as a reason for including this objective as a meaningful use objective for Stage 1. We also disagree that this objective is outside the scope of meaningful use as defined by the HITECH legislation. The HITECH legislation states the Secretary shall seek to improve not only health care quality, but also the use of electronic health records. In addition, we note that sections 1848(o)(2)(A) and 1886(n)(3)(A) of the Act provide that to be considered a meaningful EHR user, an EP, eligible hospital, or CAH must demonstrate use of certified EHR technology in a meaningful manner as defined by the Secretary. In the Medicaid context, any demonstration of meaningful use must be "acceptable to the Secretary" under 1903(t)(6). We believe this language gives us broad discretion to require the use of certified EHR technology in a manner that not only improves health care quality, but results in gains in efficiency, patient engagement and enhances privacy and security. Under the broad definition of electronic health record established by ONC in their final rule, electronic exchange of eligibility information and claims submission could certainly improve the use of electronic health records.

We believe that inclusion of administrative simplification in meaningful use is an important long-term policy goal for several reasons. First, administrative simplification can improve the efficiency and reduce unnecessary costs in the health care system as a whole; the small percentage of paper claims submitted represent a disproportionate administrative cost for health plans; the reconciliation of billing charges for services not eligible for payment creates a significant burden for providers, health plans, and most

significantly, for patients. Second, the integration of administrative and clinical information systems is necessary to support effective management and coordinated care in physician practices. The ability to leverage clinical documentation in support of appropriate charge capture (for example, for preventive counseling, or immunizations provided), the ability to link lists of patients needing clinical reminders with patient contact information, the ability to stratify quality measures by patient demographic factors (for example, race/ethnicity) and insurer status (for example, Medicare beneficiaries), are examples.

In addition, there are important benefits to the inclusion of administrative transactions in criteria and standards for the certification of EHR technologies. The option of modular certification provides an opportunity for eligible professionals and hospitals to use practice management systems or clearinghouses that provide these functions as components of their certified EHR technologies. However, we recognize there is not current agreement as to which systems constitute an EHR and that many entities may view their billing system to be outside their EHR and that the vendors of some practice management systems that provide these functionalities in doctors' offices today may not be prepared to seek certification for these legacy products in 2010/2011. We also recognize that the introduction of the X12 5010 standards in January 2012 would further complicate the certification process for stage 1. We also acknowledge that we do not have the ability to impose additional requirements on third-party payers or clearinghouses to participate in this exchange beyond what is required by HIPAA. Based on these considerations, we are not including this objective in the final rule for Stage 1 of meaningful use.

However, the introduction of these new X12 5010 standards, and the coming introduction of ICD–10 in 2013 provides an opportunity for change in Stage 2 of meaningful use. In order to meet these and other administrative simplification provisions, most providers will have to upgrade their practice management systems or implement new ones. This provides an important opportunity to achieve alignment of capabilities and standards for administrative transactions in EHR technologies with the administrative simplification provisions that the Affordable Care Act provides for health plans and health plan clearinghouses. We therefore intend to include administrative transactions as a part of Stage 2 of meaningful use, and expect providers and vendors to take this into consideration in their decisions leading up to 2013.

Comment: Commenters focusing on how meaningful use would translate into the Medicare Advantage program said that the measure of checking eligibility electronically and submitting claims electronically for 80 percent of patients seen would not be possible. They explained that for most of their visits, there is no insurance company with which to check, and there is no insurance company to whom to submit claims. They described themselves as a capitated system and for most of the patient visits, the concept of checking eligibility and submitting claims in not relevant.

Response: This comment illustrates the difficulties in adopting FFS Medicare meaningful use measures for qualifying MA organizations, MA-affiliated hospitals and MA EPs. For purposes of determining meaningful use in a Medicare Advantage environment, we agree that submitting claims electronically is not a useful standard in a capitated environment where virtually all patients are members of the same insurance plan.

After consideration of the public comments received, we are not finalizing the objective "Submit claims electronically to public and private payers".

NPRM EP/Eligible Hospital Measure: At least 80 percent of all claims filed electronically by the EP or the eligible hospital.

We received many comments on the difficulty in calculating this measure. However, as all measures are tied to objectives and we do not finalize this objective we also do not finalize the measure.

NPRM EP/Eligible Hospital Objective: Check insurance eligibility electronically from public and private payers.

Comment: Over three quarters of those commenting on this objective recommended that it be eliminated for various reasons. Some of the most common reasons for elimination are:

—Electronic eligibility checks are already covered under HIPAA;
—Electronic eligibility checks are not part of traditional EHR technology;
—Billing and practice management systems that are used for electronic eligibility checks would have to be certified as certified EHR technology adding to cost and burden;
—Electronic eligibility checks is outside of the scope of the mandate given by Congress to implement the HITECH legislation in such a way as to improve care delivery through broad scale adoption and utilization of Electronic Health Record technologies. This function does not impact the quality of care delivered and relies on product components that are traditionally part of practice management systems;
—Information returned on typical electronic eligibility checks is of little use to providers—as responses are usually a yes/no answer on coverage, but not the specificity of coverage;
—The current poor adoption rate of the use of electronic eligibility verification is indicative of the deficiencies in current methods;
—Once eligibility checking becomes easy to use and reliable, no incentive will be required as providers will adopt the process readily;
—Payers do not guarantee their eligibility results;
—Many payers are still not in compliance with the HIPAA 270/271 electronic eligibility standard. Therefore the objective should only be required if compliance with the standard by health plans can be guaranteed; and
—Private payers may customize the HIPAA-recognized standard transactions, which limits the ability of practices to obtain accurate information prior to receiving an Explanation of Benefits based on the actual services provided and negates many of the benefits of having standardized transactions.

Response: In our proposed rule, we specifically cite the existence of the standard transaction for eligibility checks available under HIPAA as an enabling factor for the inclusion this objective. As with the electronic claims submission objective discussed above, we disagree that this objective is outside the scope of meaningful use as defined by the HITECH legislation. The HITECH legislation requires the Secretary to seek to improve not only health care quality, but also the use of electronic health records. Under the broad definition of electronic health record established by ONC in their final rule, electronic exchange of eligibility information could certainly improve the use of electronic health records. However, we recognize there is not current agreement as to which systems constitute an EHR and that many entities may view their practice management system to be outside their EHR. We also acknowledge that we do not have the ability to impose additional requirements on third-party payers to participate in this

exchange beyond what is required by HIPAA. Third-party payers can provide simple yes/no responses, modify the standard transactions and do not have to guarantee their results. We agree with commenters that this significantly devalues the results of this objective. However, we do believe that as electronic records and exchange based on this and considerations that commenters nearly universally considered this to not be a function of EHR, we are not including this objective in the final rule for Stage 1 of meaningful use. However, we do believe that inclusion of a robust system to check insurance eligibility electronically is an important long term policy goal for meaningful use of certified EHR technology and we intend to include this objective as well as electronic claims submission Stage 2.

After consideration of the public comments received, we are not finalizing the objective to "Check insurance eligibility electronically from public and private payers" or any modification thereof. Given that we are not finalizing the objective, we also are not finalizing the associated EP and eligible hospital/CAH measures.

The second health outcomes policy priority identified by the HIT Policy Committee is to engage patients and families in their healthcare. The following care goal for meaningful use addresses this priority:

- Provide patients and families with timely access to data, knowledge, and tools to make informed decisions and to manage their health.

As explained in the proposed rule, we do not intend to preempt any existing Federal or State law regarding the disclosure of information to minors, their parents, or their guardians in setting the requirements for meaningful use. For this reason, we defer to existing Federal and State laws as to what is appropriate for disclosure to the patient or their family. For purposes of all objectives of the Stage 1 criteria of meaningful use involving the disclosure of information to a patient, a disclosure made to a family member or a patient's guardian consistent with Federal and State law may substitute for a disclosure to the patient.

Comment: Several commenters requested that all objectives under the health care policy priority be combined, as they are redundant.

Response: We disagree that they are redundant and believe each serves a unique purpose. We will more fully describe those purposes in the discussion of each objective.

NPRM EP Objective: Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, allergies) upon request.

NPRM Eligible Hospital Objective: Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies, discharge summary, procedures), upon request

The purpose of this objective is to provide a patient's health information to them electronically and in a human readable format and in accordance with the standards specified in the ONC final rule subject to its availability to the provider electronically and any withholding under regulations related to the HIPAA Privacy Act at 45 CFR 164.524, Access of individuals to protected health information.

In the proposed rule, we indicated that electronic copies may be provided through a number of secure electronic methods (for example, personal health record (PHR), patient portal, CD, USB drive). We have changed this description in response to comments to that when responding to patient requests for information, the EP, eligible hospital, or CAH should accommodate patient requests in accordance with 45 CFR 164.524, Access of individuals to protected health information. The objective provides additional criteria for meeting meaningful use concerning the electronic copy or provision of information that the EP, eligible hospital or CAH maintains in or can access from the certified EHR technology and is maintained by or on behalf of the EP, eligible hospital or CAH.

Comment: We received requests for clarification that only information that the EP, eligible hospital, or CAH has available electronically must be provided to the patient.

Response: Yes, we limit the information that must be provided electronically to that information that exists electronically in or accessible from the certified EHR technology and is maintained by or on behalf of the EP, eligible hospital or CAH. We believe it is impractical to require information maintained on paper to be transmitted electronically. Furthermore, given the other criteria of Stage 1 of meaningful use, we believe sufficient information will be available through certified EHR technology, especially given the inclusion of many of the foundational objectives that were included in the core set.

Comment: Commenters pointed out that the HIPAA Privacy Rule permits licensed healthcare professionals to withhold certain information if its disclosure would cause substantial harm to the patient or another individual.

Response: As previously discussed for patient preference, we do not seek to conflict with or override HIPAA through meaningful use requirements. Therefore, an EP, eligible hospital, or CAH may withhold information from the electronic copy of a patient's health information in accordance with the regulations at 45 CFR 164.524, Access of individuals to protected health information.

Comment: Commenters requested clarification of the term "health information" or alternatively a list of elements required to satisfy the objective.

Response: Subject to the withholding described above, an EP, eligible hospital, or CAH should provide a patient with all of the health information they have available electronically. At a minimum, this would include the elements listed in the ONC final rule at 45 CFR 170.304(f) for EPs and 45 CFR 170.306(d) for eligible hospitals and CAHs as required for EHR technology to become certified.

Comment: Several commenters indicated that a provider should be allowed to charge a fee for providing an electronic copy of a patient's health information.

Response: We do not have the authority under the HITECH Act to regulate fees in this manner. Rather, the charging of fees for this information is governed by the HIPAA Privacy Rule at 45 CFR 164.524(c)(4) (which only permits HIPAA covered entities to charge an individual a reasonable, cost-based fee for a copy of the individual's health information). We would expect these costs to be very minimal considering that the ability to generate the copy is included in certified EHR technology. Additional clarification on the fee that a HIPAA covered entity may impose on an individual for an electronic copy of the individual's health information will be addressed in upcoming rulemaking.

Comment: Commenters pointed out that the general term "allergies" is inconsistent with other objectives of Stage 1 and with the capabilities mandated by certification under the ONC IFR, which address only medication allergies.

Response: As we have stated on several other objectives, we encourage all EPs, eligible hospitals, and CAHs to work with their EHR technology designers to make capabilities most relevant to their individual practices of care. However, we have maintained that at a minimum the capabilities that are part of certification should be included

and those should be the basis for meaningful use so we do modify this objective to medication allergies to align it with other objectives and certification.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(d)(12)(i) of our regulations to "Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, medication allergies) upon request" and for eligible hospitals and CAHs at § 495.6(f)(11)(i) of our regulations to "Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request".

We include this objective in the core set as it is integral to involving patients and their families in their provision of care and was recommended by the HIT Policy Committee for inclusion in the core set.

NPRM EP/Eligible Hospital Measure: At least 80 percent of all patients who request an electronic copy of their health information are provided it within 48 hours.

In the proposed rule, we pointed out that all patients have a right under ARRA to an electronic copy of their health information. We said that our purpose for including it in meaningful use was to ensure that this requirement in met in a timely fashion. We also said that providing patients with an electronic copy of their health information demonstrates one of the many benefits health information technology can provide and we believe that it is an important part of becoming a meaningful EHR user. We received requests for clarifications on what must be provided and in what timeframe. We address those requests in the comment and response section below. We note here that participation in the Medicare and Medicaid EHR incentive programs is voluntary. Nothing in the Stage 1 criteria of meaningful use supersedes or exempts an EP, eligible hospital or CAH from complying with otherwise applicable requirements to provide patients with their health information.

Comment: An overwhelming majority of commenters commenting on this objective indicated that the 48-hour time frame is too short and inconsistent with the HIPAA Privacy Rule.

Response: We discuss the reasoning for the time frame in the proposed rule. We state that this measure seeks to ensure that a patient's request is met in a timely fashion. Providing patients with an electronic copy of their health information demonstrates one of the many benefits health information technology can provide. We also believe that certified EHR technology will provide EPs, eligible hospitals, and CAHs more efficient means of providing copies of health information to patients, which is why we proposed that a request for an electronic copy be provided to the patient within 48 hours.

In the final rule, we further point out that this objective is limited to health information maintained and provided electronically while HIPAA can require the retrieval, copying and mailing of paper documents. For this reason, we do not believe the timeframes under this meaningful use objective and the HIPAA Privacy Rule must be aligned. However, we appreciate that the 48-hour timeframe may be burdensome for some providers, particularly for those providers who do not operate 24/7. We therefore are lengthening the timeframe to three business days. Business days are defined as Monday through Friday excluding federal or state holidays on which the EP, eligible hospital, or CAH or their respective administrative staffs are unavailable. As an example if a patient made a request for an electronic copy of their health information on Monday then the EP, eligible hospital, or CAH would have until the same time on Thursday to provide the information assuming there were no intervening holidays. If provision of the copy involves the mailing of physical electronic media, then it would need to be mailed on the Thursday.

Comment: Some commenters believed the 80 percent threshold was too high or introduced examples of extraordinary circumstances such as natural disasters or system crashes that would indicate a lower threshold is needed to accommodate them.

Response: We reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information, as explained under our discussion of the objective of maintain an up-to-date problem list. As this is a relatively new capability that was not available to either providers or patients before the introduction of EHRs, we do not believe it meets the same standard of practice as maintaining an up-to-date problem list and therefore adopt a threshold of 50 percent (rather than 80 percent).

Comment: We received comments that were concerned about the reporting burden of this requirement.

Response: We believe that as long as the request by the patient is accurately recorded in the certified EHR technology then the certified EHR technology should be able to calculate the measure. Recording patient requests for certain actions should be part of the expectations of meaningful use of certified EHR technology. If the EP, eligible hospital, or CAH records the requests using certified EHR technology, certified EHR technology will be able to assist in calculating both the numerator and denominator. If the requests are recorded by another means at the choice of the provider, the provider would be responsible for determining the denominator.

Comment: Commenters inquired if third-party requests for information are included in the denominator.

Response: Only specific third party requests for information are included in the denominator. As we stated in the opening discussion for this health care priority, providing the copy to a family member or patient's authorized representative consistent with federal and state law may substitute for a disclosure of the information to the patient and count in the numerator. A request from the same would count in the denominator. All other third party requests are not included in the numerator or the denominator.

Comment: Commenters inquired if asking the patient to register for their own personal health record (PHR) satisfies the intent of the objective.

Response: EPs, eligible hospitals and CAHs are to provide the information pursuant to the reasonable accommodations for patient preference under 45 CFR164.522(b). To be included in this measure, the patient has already requested an electronic method. While having a third party PHR certainly would be one method, assuming the provider could populate the PHR with all the information required to meet this objective. The provider should provide the same level of assistance to the patient that would be provided as if they maintained their own patient portal.

Comments: Comments were received requesting the format and media for the provision of the health information.

Response: As this is for use by the patient, the form and format should be human readable and comply with the HIPAA Privacy Rule, as specified at 45 CFR 164.524(c). In addition, efforts should be made to make it easily understandable to the patient. The media could be any electronic form such as patient portal, PHR, CD, USB fob, etc. As stated in the previous response, EPs, eligible hospitals and CAHs are expected to make reasonable

accommodations for patient preference as outlined in 45 CFR 164.522(b).

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(12)(i) and for eligible hospitals at § 495.6(f)(11)(i) of our regulations to "More than 50 percent of all patients of the EP or the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days."

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(f) for EPs and 45 CFR 170.306(d) for eligible hospitals and CAHs. The ability to calculate the measure is included in certified EHR technology.

As the provision of the electronic copy is limited to the information contained within certified EHR technology, this measure is by definition limited to patients whose records are maintained using certified EHR technology as described previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* The number of patients of the EP or eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) who request an electronic copy of their electronic health information four business days prior to the end of the EHR reporting period.
- *Numerator:* The number of patients in the denominator who receive an electronic copy of their electronic health information within three business days.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure. As addressed in other objectives and in comment response, if the EP, eligible hospital, or CAH has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period they would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM Eligible Hospital Objective: Provide patients with an electronic copy of their discharge instructions and procedures at time of discharge, upon request.

The purpose of this objective is to provide the option to patients to receive their discharge instructions electronically. Discharge instructions would not necessarily be included in a copy of health information and it is unlikely that a patient would request a copy of their health information at every discharge. This objective is unique to eligible hospitals and CAHs.

Comment: We received several comments suggesting that we eliminate or clarify the term "procedures."

Response: As we believe the terms "instructions" and "procedures" are interchangeable as used in this objective, we are removing the term "procedures" from the objective. We left this term in the provision of electronic copy of health information as the term "instructions" is not in that objective. We clarify that the term "instructions" means any directions that the patient must follow after discharge to attend to any residual conditions that need to be addressed personally by the patient, home care attendants, and other clinicians on an outpatient basis.

Comment: Commenters pointed out that the HIPAA Privacy Rule permits licensed healthcare professionals to withhold certain information if its disclosure would cause substantial harm to the patient or another individual.

Response: We reiterate that it is not our intent for the meaningful use objectives to conflict or override the HIPAA Privacy Rule through meaningful use requirements. Therefore an EP, eligible hospital, or CAH may withhold information from the electronic copy to the extent they are permitted or required to do so in accordance with the regulations at 45 CFR 164.524.

Comment: Some commenters recommended that hospitals should be required to either provide every patient an electronic copy of their discharge instructions or at least inform them of the option to receive it electronically.

Response: We believe it would be too burdensome to provide every patient an electronic copy of his or her discharge instructions. Furthermore, we anticipate that many, if not most, patients will prefer a paper copy during the years of Stage 1. While we certainly encourage eligible hospitals to inform their patients of the option to receive their discharge instructions electronically, we do not see requiring this as within the scope of meaningful use of certified EHR technology for Stage 1.

Comment: Comments were received requesting a clarification of the data that should be included in the discharge instructions.

Response: This objective simply refers to the option of the electronic provision of instructions that would be provided to the patient. We believe eligible hospitals are the appropriate entity to determine the information that should be included in the discharge instructions.

Comment: Comments were received requesting the format and media for the discharge instructions.

Response: As this is for use by the patient, the form and format should be human readable and comply with the HIPAA Privacy Rule, as specified at 45 CFR 164.524(c). In addition, efforts should be made to make it easily understandable to the patient. The media could be any electronic form such as patient portal, PHR, CD, USB fob, etc. EPs, eligible hospitals and CAHs are expected to make reasonable accommodations for patient preference as outlined in 45 CFR 164.522(b).

After consideration of the public comments received, we are finalizing the objective at 495.6(f)(12)(i) of our regulations as proposed.

We include this objective in the core set as it is integral to involving patients and their families in their provision of care and was recommended by the HIT Policy Committee for inclusion in the core set.

NPRM Eligible Hospital Measure: At least 80 percent of all patients who are discharged from an eligible hospital and who request an electronic copy of their discharge instructions and procedures are provided it.

Comment: Some commenters believed the 80 percent threshold was too high or introduced examples of extraordinary circumstances that would indicate that a lower threshold is needed to accommodate them.

Response: We reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information. However, as this is a relatively new capability that was not available to either providers or patients before the introduction of EHRs we do not believe it meets the same standard of practice as maintaining an up-to-date problem list and therefore adopt a threshold of 50 percent (rather than 80 percent).

Comment: Some commenters expressed concern about the reporting burden imposed by this requirement.

Response: We believe that as long as the request by the patient is accurately recorded in the certified EHR

technology then the certified EHR technology should be able to calculate the measure. We believe that recording patient requests for certain actions that involve the use of certified EHR technology should be part of EPs, eligible hospitals and CAHs standard practice. If the eligible hospital or CAH records the requests using certified EHR technology, certified EHR technology will be able to assist in calculating both the numerator and denominator. If the requests are recorded by another means at the choice of the provider, the provider would be responsible for determining the denominator.

Comment: Several of the comments requested clarification of the timeframe in which the discharge instructions should be provided to the patient.

Response: As discussed previously, this objective simply refers to the option of the electronic provision of instructions that would be provided to the patient at the time of discharge. Therefore, we believe for the information to be useful to the patient, the instructions themselves or instructions on how to access them electronically should be furnished at the time of discharge from the eligible hospital or CAH.

Comment: Some comments expressed concern that providing an electronic copy of discharge instructions to the patient at the time of discharge would disrupt workflows and lengthen the discharge process resulting in reduced bed turnover in emergency departments.

Response: As discussed previously, this objective simply refers to the option of the electronic provision of instructions that would be provided to the patient at the time of discharge. We do not believe the provision of an electronic copy of the discharge instructions, upon request, at the time of discharge alters current workflow or lengthens the discharge process. A patient could be provided instructions on how to access an Internet Web site where they can get the instructions or asked to provide an e-mail address or simply be handed electronic media instead of or in addition to a paper copy.

After consideration of the public comments received, we are modifying the meaningful use measure at § 495.6(f)(12)(ii) of our regulations to "More than 50 percent of all patients who are discharged [1] from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it."

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.306(e). The ability to calculate the measure is included in certified EHR technology.

As with the previous objective, the provision of the electronic copy of the discharge summary is limited to the information contained within certified EHR technology; therefore this measure is by definition limited to patients whose records are maintained using certified EHR technology as described previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of patients discharged from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) who request an electronic copy of their discharge instructions and procedures during the EHR reporting period.
- *Numerator:* The number of patients in the denominator who are provided an electronic copy of discharge instructions.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure.

As addressed in other objectives and in comment response, if the eligible hospital or CAH has no requests from patients or their agents for an electronic copy during the EHR reporting period they would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP Objective: Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within 96 hours of the information being available to the EP.

In the proposed rule, we described timely as within 96 hours of the information being available to the EP through either the receipt of final lab results or a patient interaction that updates the EP's knowledge of the patient's health. We said we judged 96 hours to be a reasonable amount of time to ensure that certified EHR technology is up to date and welcomed comment on if a shorter or longer time is advantageous. We did receive comments on the time frame and have revised it as discussed below in the comment and response section.

Comment: We received comments recommending that "access" be clarified to determine whether this is online access as indicated in the ONC certification criteria for certified EHR technology or just electronic access.

Response: We believe we inadvertently created confusion by listing the examples of electronic media (CD or USB drive) in which this access could be provided. As many commenters inferred, it was our intention that this be information that the patient could access on demand such as through a patient portal or PHR. We did not intend for this to be another objective for providing an electronic copy of health information upon request.

Comment: Several commenters requested that all objectives included in the health care policy priority "engage patients and their families" be combined, as they are redundant.

Response: We disagree that they are redundant and believe each serves a unique purpose. We regret any confusion created by the inclusion of CD or USB drive as examples of electronic media caused in the intent of this measure. The difference between electronic access and an electronic copy is that a patient with electronic access can access the information on demand at anytime while a patient must affirmatively request an electronic copy from the EP, eligible hospital or CAH at a specific time and the information in the copy is current only as of the time that the copy is transferred from the provider to the patient.

Comment: Some commenters asserted that some results and other sensitive information are best communicated at a face-to-face encounter.

Response: We agree that there may be situations where a provider may decide that electronic access of a portal or Personal Health Record is not the best forum to communicate results. Within the confines of laws governing patient access to their medical records, we would defer to EP's, eligible hospital or CAH's judgment as to whether to hold information back in anticipation of an actual encounter between the provider and the patient. Furthermore just as in the provision of electronic copy, an EP may withhold information from being

[1] Please note that although the final rule meaningful use measures refer to patients discharged from an emergency department, such emergency room releases are not eligible hospital discharges for purpose of determining hospital payment incentives under section 1886(n) of the Act. Section 1886(n) payments are only with respect to "inpatient" hospital services pursuant to section 1886(n)(1)(A) of the Act.

accessible electronically by the patient in accordance with regulations at 45 CFR 164.524. Any such withholding would not affect the EP's, eligible hospital's or CAH's ability to meet this objective as that information would not be included. We do not believe there would be a circumstance where all information about an encounter would be withheld from the patient and therefore no information would be eligible for uploading for electronic access. If nothing else, the information that the encounter occurred can be provided. Please note that providers must comply with all applicable requirements under the HIPAA Privacy Rule, including 45 CFR 164.524.

Comment: We received several comments stating that the time frame of 96 hours is too burdensome for EPs.

Response: While we believe that 96 hours is sufficient, most EPs do not operate 24/7. Therefore, we will limit the timeframe to business days, in effect changing the timeframe from 96 hours in the proposed rule to four business days. Business days are defined as Monday through Friday excluding federal or state holidays on which the EP, eligible hospital or CAH or their respective administrative staffs are unavailable.

Comment: Commenters pointed out that allergies is inconsistent with other objectives of Stage 1 and with the capabilities mandated by certification under the ONC final rule.

Response: As we have stated on several other objectives, we encourage all EPs, eligible hospitals, and CAHs to work with their EHR technology designers to make capabilities as relevant to their individual practices of care as possible. However, we maintain that at a minimum the capabilities that are part of certification should be included in certified EHR technology so we do modify this objective to medication allergies to align it with other objectives and certification.

After consideration of the public comments received, we are modifying the objective for EPs at § 495.6(d)(6)(i) of our regulations to "Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, medication allergies) within four business days of the information being available to the EP".

NPRM EP Measure: At least 10 percent of all unique patients seen by the EP are provided timely electronic access to their health information.

In the proposed rule, we said that we recognize that many patients may not have internet access, may not be able or interested to use a patient portal. Health systems that have actively promoted such technologies have been able to achieve active use by over 30 percent of their patients, but this may not be realistic for many practices in the short term. We received comments on this justification for the threshold and requests for clarification, which are addressed in the comment and response section below.

Comment: Some commenters expressed concern about the calculation of the percentage and expressed the preference to use an absolute count instead of a percentage.

Response: We acknowledge there are unique concerns about calculating this percentage as it involves determining the timeliness of the information. Certified EHR technology would be able to ascertain the time from when the information was entered into its system to when the information was available for electronic access. As certified EHR technology can provide the access, any perceivable delay or requirement for affirmative action would be built in by the user to allow for review of the information before posting. Certified EHR technology could not be distinguish the difference in time when the information was available to the provider and when it was entered into certified EHR technology. However, we see no reasonable way to track this time frame that does not impose a heavy burden on the EP. Therefore, for the measure, we define the four business days time frame as the time frame when the information is updated in the certified EHR technology to when it is available electronically to the patient, unless the provider indicates that the information should be withheld. It is acceptable for a provider to set an automated withhold on certain information at their discretion. As we have discussed previously in this section, we do not believe absolute counts are an adequate substitute for percentage calculations.

Comment: We received comments requesting clarification on what data must be made available.

Response: Certified EHR technology must be able to make certain data available according to the ONC final rule. At a minimum, the data specified in the ONC final rule at 45 CFR 170.304(g) must be available subject to the ability of the provider to withhold it discussed previously.

Comment: Commenters suggested that some EPs might not have 10 percent of their patient population who desire or could utilize such access.

Response: We agree that this is a possibility. We stated in the proposed rule that "we recognize that many patients may not have internet access, may not be able or interested in the use of a patient portal." Health systems that have actively promoted such technologies have been able to achieve active use by over 30 percent of their patients. However, this 30 percent threshold may not be realistic for many practices in the short term and therefore serves justification for the 10 percent threshold. However, the objective and measure focus on the availability of the access and the timeliness of the data in it, not its utilization. Therefore, we focus on the fact that more than 10 percent of unique patients seen during the EHR reporting period could access it and that the information is timely. The EP is not responsible for ensuring that 10 percent request access or have the means to access. However, we encourage EPs to make the availability of electronic access known to their patients.

Comment: A commenter inquired about the provider's liability versus the EHR technology vendor for a security breach of the system.

Response: Depending on the facts surround the security breach, the provider may be liable for a violation under the HIPAA Privacy and Security Rules, as well as under any other applicable federal or state laws. Additionally, there may be circumstances where the EHR technology vendor acted as a business associate and may potentially have liability under the HIPAA Privacy and Security Rules. The issue of business associate liability under the HIPAA Privacy and Security Rules will be addressed in upcoming rulemaking.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(6)(ii) of our regulations to "At least 10 percent of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(g). The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP during the EHR

reporting period. A unique patient is discussed under the objective of CPOE.

- *Numerator:* The number of patients in the denominator who have timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information online.
- *Threshold:* The resulting percentage must be at least 10 percent in order for an EP to meet this measure.

As addressed in other objectives and in comment response, if an EP neither orders nor creates any of the information listed in the ONC final rule 45 CFR 170.304(g) and therefore included in the minimum data for this objective during the EHR reporting period they would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP Objective: Provide clinical summaries for patients for each office visit.

In the proposed rule, we discussed why we were basing the objective on office visits rather than encounters. We said that we did want encounter to be construed to mean every time a provider interacts with the patient. We received comments requesting that we further define office visit and address those in the comment and response section below. In discussing the measure in the proposed rule, we also said that the clinical summary can be provided through a PHR, patient portal on the web site, secure email, electronic media such as CD or USB fob, or printed copy. The after-visit clinical summary contains an updated medication list, laboratory and other diagnostic test orders, procedures and other instructions based on clinical discussions that took place during the office visit.

Comment: We received requests for clarification as to what constitutes an "office visit".

Response: An office visit is defined as any billable visit that includes: (1) Concurrent care or transfer of care visits, (2) Consultant visits and (3) Prolonged Physician Service without Direct (Face-To-Face) Patient Contact (tele-health). A consultant visit occurs when a provider is asked to render an expert opinion/service for a specific condition or problem by a referring provider.

Comment: Some commenters believed the requirement for the provision of a clinical summary at an office visit should be linked to the type or purpose of the office visit. Samples of the suggested visits are—

—Level 4 or level 5 evaluation and management services;
—Visits conducted at the conclusion of an episode of care;
—Visits conducted at each transition of care;
—Visits relevant to specific conditions such as asthma; and
—Provider to patient face-to-face visits.

Response: We believe that a clinical summary should be provided at all office visits included in the definition of office visit as defined in this final rule. We believe all of the office visits described in our definition result in the EP rendering a clinical judgment that should be communicated to the patient.

Comment: Commenters requested CMS define "clinical summary" and offered several specific data elements that should be included in the definition such as patient name, provider name, date of visit, location of visit, reason for visit, updated medication list, laboratory orders, diagnostic orders, patient instructions based on discussions with the provider and a nutrition care management plan.

Response: After reviewing the comments we define clinical summary as an after-visit summary that provides a patient with relevant and actionable information and instructions containing, but not limited to, the patient name, provider's office contact information, date and location of visit, an updated medication list and summary of current medications, updated vitals, reason(s) for visit, procedures and other instructions based on clinical discussions that took place during the office visit, any updates to a problem list, immunizations or medications administered during visit, summary of topics covered/considered during visit, time and location of next appointment/testing if scheduled, or a recommended appointment time if not scheduled, list of other appointments and testing patient needs to schedule with contact information, recommended patient decision aids, laboratory and other diagnostic test orders, test/laboratory results (if received before 24 hours after visit), and symptoms.

Comment: Commenters pointed out that the HIPAA Privacy Rule permits licensed healthcare professionals to withhold certain information if its disclosure would cause substantial harm to the patient or another individual.

Response: As the EP is proactively providing this information to the patient, 45 CFR 164.524 of the HIPAA Privacy rule does not apply to this situation. However, we still believe that an EP should be able to withhold information if its disclosure would cause substantial harm to the patient or another individual. Therefore, if in their judgment substantial harm may arise from the disclosure of particular information, an EP may choose to withhold that particular information from the clinical summary

Comment: Most commenters noted that other than "at the time of the visit", there was no specific time period given in which to comply with this objective. If CMS intended "at the time of the visit" to mean before the patient leaves the building or upon the patient's request, neither are possible due to workflow and review processes. Most commenters assumed we would associate the 48 hours related to the 'copy' requirement or the 96 hours related to the 'access' requirement to address this comment and stated that both were too short a period for a clinical visit summary. Others recommended the 30-day timeframe for the provision information set forth under the HIPAA Privacy Rule.

Response: We agree that our proposed objective lacked specificity about the time to comply. To provide such specificity, we adopt the timeframe of three business days from our objective of providing electronic health information to the patient. That is three business days following the day of the visit excluding holidays as described in the providing electronic health information to the patient objective.

Comment: Several commenters requested changes to the media through which this information could be provided. Differing commenters recommended eliminating the paper option, while others recommended only the paper option.

Response: We believe that more options give the EP needed flexibility. The EP could choose any of the listed means from the proposed rule of PHR, patient portal on a Web site, secure email, electronic media such as CD or USB fob, or printed copy. If the EP chooses an electronic media, they would be required to provide the patient a paper copy upon request. Both forms can be and should be produced by certified EHR technology.

Comment: Several commenters indicated that a provider should be allowed to charge a fee for providing the copy.

Response: As this is a proactive requirement on the part of the EP and not a response to a request from the patient, we do not believe it is appropriate to charge the patient a fee for this copy. We note that we give the EP considerable flexibility in the

manner in which the copy is provided including the provision of a paper copy. The only accommodation an EP is required to make is the provision of a paper copy that can be automatically generated certified EHR technology. We therefore believe that costs of this will be negligible.

Comment: A number of commenters expressed concern regarding whether the current available technology could produce a summary of the required information in a standardized format, the use of clinical nomenclature rather than lay terms and the fact that some providers use multiple modules to document the care of the patient.

Response: We believe it is appropriate to leave the design of EHR technology systems and their outputs to the system developers and the EHR technology users. However, we note that the capability to meet this objective is included in the ONC final rule at 45 CFR 170.304(h) as a criteria for certified EHR technology and we are confident that vendors will be able to produce certified EHR technologies.

After consideration of the public comments received, we are finalizing the objective for EPs at § 495.6(d)(13)(i) of our regulations as proposed.

We include this objective in the core set as it is integral to involving patients and their families in their provision of care and was recommended by the HIT Policy Committee for inclusion in the core set.

NPRM EP Measure: Clinical summaries provided to patients for at least 80 percent of all office visits.

Comment: Some commenters believed the threshold was too high or should be replaced with a numerical count or attestation.

Response: We reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and is not, for purposes of Stage 1 criteria, reliant on the electronic exchange of information. Also, as this is a relatively new capability that was not available to either providers or patients before the introduction of EHRs, we do not believe it meets the same standard of practice as maintaining an up-to-date problem list and therefore adopt a threshold of 50 percent (rather than 80 percent).

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(13)(ii) of our regulation to "Clinical summaries provided to patients for more than 50 percent of all office visits within 3 business days".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(h). The ability to calculate the measure is included in certified EHR technology.

As with the previous objective, the provision of the clinical summary is limited to the information contained within certified EHR technology; therefore this measure is by definition limited to patients whose records are maintained using certified EHR technology as described previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP for an office during the EHR reporting period. A unique patient is discussed under the objective of using CPOE.
- *Numerator:* Number of patients in the denominator who are provided a clinical summary of their visit within three business days.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure.

As addressed in other objectives, EPs who have no office visits during the EHR reporting period would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

NPRM EP/Eligible Hospital Objective: "Provide access to patient-specific education resources upon request."

In the proposed rule, we discussed this objective, but did not propose it. We stated that there was a paucity of knowledge resources that are integrated with EHR, and that also are widely available. We also noted that the ability to provide education resources in multiple languages might be limited. We stated our intent to further explore the objective in subsequent stages of meaningful use.

Comment: We received many comments, including comments from both the HIT Policy Committee and MedPAC, to include this measure in the final rule. These commenters disagreed with our assertion in the proposed rule that "there is currently a paucity of knowledge resources that are integrated within EHRs, that are widely available, and that meet these criteria, particularly in multiple languages." Specific examples of the availability of knowledge resources integrated with current EHRs were provided. The HIT Policy Committee amended their recommendation in their comments on the proposed rule to:

—EPs and hospitals should report on the percentage of patients for whom they use the EHR to suggest patient-specific education resources.

Other recommended language for the objective includes:

—Provide patients educational information that is specific to their health needs as identified by information contained in their EHR technology such as diagnoses and demographic data, and

—The original HIT Policy Committee objective of "Provide access to patient-specific education resources upon request."

Response: We are convinced by commenters that the availability of education resources linked to EHRs is more widely available than we had indicated in the proposed rule. Therefore, for the final rule we will include this objective for the Stage 1 of meaningful use. We note that the new recommendation of the HIT Policy Committee is a hybrid of a measure and an objective, whereas in developing the meaningful use criteria we consistently identify both an objective and associated measure. However, we agree with the HIT Policy Committee and others that the objective and associated measure should make clear that the EP, eligible hospital or CAH should utilize certified EHR technology in a manner where the technology suggests patient-specific educational resources based on the information stored in the certified EHR technology. Therefore, we are including a revised version of this objective in the final rule for Stage 1 of meaningful use.

We also believe it is necessary to state what level of EP, eligible hospital and CAH discretion is available when deciding whether to provide education resources identified by certified EHR technology to the patient. Therefore, we include the phrase "if appropriate", which allows the EP or the authorized provider in the eligible hospital or CAH final decision on whether the education resource is useful and relevant to a specific patient.

After consideration of the public comments received, we are including this meaningful use objective for EPs at § 495.6(e)(6)(i) and eligible hospitals and CAHs at § 495.6(g)(5)(i) of our regulations as "Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate".

NPRM EP/Eligible Hospital Measure: Not applicable.

Comment: CMS received a comment requesting an 80 percent threshold of appropriate patients and/or caregivers receiving patient-specific educational materials. In addition, the HIT Policy Committee's revised objective suggests a patient based percentage.

Response: As with the addition of the recording of advance directives, we are able to relate this measure to one that is based on patients and can be accomplished solely using certified EHR technology. As this objective requires more than just the recording of information in certified EHR technology, we adopt a lower threshold of 10 percent.

After consideration of the public comments received, we are including this meaningful use measure for EPs at § 495.6(e)(6)(ii) and eligible hospitals at § 495.6(g)(5)(ii) of our regulations as "More than 10 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(m). The ability to calculate the measure is included in certified EHR technology.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period. A unique patient is discussed under the CPOE objective.
- *Numerator:* Number of patients in the denominator who are provided patient education specific resources.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an EP, eligible hospital, or CAH to meet this measure.

We do not believe that any EP, eligible hospital, or CAH will not have more than 10 percent of their patients eligible to receive patient specific education resources and therefore do not believe an exclusion is necessary for this objective.

The third health outcomes policy priority identified by the HIT Policy Committee is to improve care coordination. The HIT Policy Committee recommended the following care goals to address this priority:

- Exchange meaningful clinical information among professional health care team.

NPRM EP Objective: Capability to exchange key clinical information (for example, problem list, medication list, allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.

NPRM Eligible Hospital Objective: Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically.

In the proposed rule, we defined the term "diagnostic test results " as all data needed to diagnose and treat disease, such as blood tests, microbiology, urinalysis, pathology tests, radiology, cardiac imaging, nuclear medicine tests, and pulmonary function tests. We maintain this description for the final rule. We said that when the information was available in a structured format we expected that it be transferred in a structured format. However, if it was unavailable in a structured format, that the transmission of unstructured data was permissible. We provide additional information on structured data in the comment and response section, but maintain for the final rule the concept that the exchange can be of structured or unstructured data.

Comment: Commenters requested clarification of the term "key clinical information."

Response: By "clinical information", we mean all data needed to diagnose and treat disease, such as blood tests, microbiology, urinalysis, pathology tests, radiology, cardiac imaging, nuclear medicine tests, and pulmonary function tests. We leave it to the provider's clinical judgment as to identifying what clinical information is considered key clinical information for purposes of exchanging clinical information about a patient at a particular time with other providers of care. The examples we provided in the proposed rule and the final rule below are not intended to be exhaustive. ONC in their final rule provides a minimum set of information that certified EHR technology must be able to exchange in order to be certified. A provider's determination of key clinical information could include some or all of this information as well as information not included in the ONC final rule at 45 CFR 170.304(i) for EPs and 45 CFR 170.306(f) for eligible hospitals and CAHs.

Comment: Commenters requested clarification of the term "patient authorized entities."

Response: By "patient authorized entities", we mean any individual or organization to which the patient has granted access to their clinical information. Examples would include an insurance company that covers the patient, an entity facilitating health information exchange among providers or a personal health record vendor identified by the patient. A patient would have to affirmatively grant access to these entities.

Comment: Commenters requested clarification of the term "exchange."

Response: We expect that this information, when exchanged electronically, would be exchanged in structured electronic format when available (for example, drug and clinical lab data). However, where the information is available only in unstructured electronic formats (for example, free text and scanned images), we would allow the exchange of unstructured information. We believe that the electronic exchange of information is most efficient when it is exchanged from a provider's certified EHR technology to another certified EHR technology either directly or through an entity facilitating health information exchange using structured data that can be automatically identified by the receiving system and integrated into the receiver's records. However, we know that much information cannot currently be, and may never be, transmitted in the way we just described.

Comment: Commenters requested clarification of the term "structured data."

Response: This distinction between structured data and unstructured data applies to all types of information. We have previously defined structured data in this section. To ensure that certified EHR technology has a certain level of functionality, ONC at 45 CFR 170.304(i) for EPs and 45 CFR 170.306(f) for eligible hospitals and CAHs specified certain types of information that a certified EHR technology must be able to exchange to become certified. ONC also provided standards to support this exchange. These standards do not preclude a vendor of EHR technology from enabling its product to exchange additional types of information nor limit the provider's discretion (either in exchanging more or less) in deciding what information is key and should be exchanged about a given patient at a given time.

Comment: Commenters expressed concern that the exchange of key

clinical information via certified EHR systems requires a unique or national patient identifier to ensure accurate exchange.

Response: While such an identifier could facilitate an exchange, it need only be unique to the parties involved in the exchange and need not be national in scope, nor is a specific unique identifier necessary for successful exchanges. Many current health information exchanges have had success identifying patients by a combination of several elements of information without a separate independent identifier.

Comment: Commenters pointed out that the general term "allergies" is inconsistent with other objectives of Stage 1 and with the capabilities mandated by certification under the ONC final rule, which uses the term "medication allergies".

Response: As we have stated on several other objectives, we encourage all EPs, eligible hospitals, and CAHs to work with their certified EHR technology designers to make capabilities most relevant to their individual practices of care. However, we have maintained that at a minimum the capabilities that are part of certification should be included so we modify the example to change allergies to medication allergies to align it with other objectives and certification.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(d)(14)(i) of our regulations to "Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, and diagnostic test results), among providers of care and patient authorized entities electronically" and for eligible hospitals and CAHs at § 495.6(f)(13)(i) to "Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically".

In response to our revised requirements for meeting meaningful use, we included this objective in the core set. Section 1848 (o)(2)(A)(ii) of the Act specifically includes electronic exchange of health information in meaningful use for eligible professionals.

NPRM EP/Eligible Hospital Measure: Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.

In the proposed rule, we identified this objective as reliant on the electronic exchange of information. We said that we are aware that in most areas of the country, the infrastructure necessary to support such exchange is still being developed. Therefore, for the Stage 1 criteria of meaningful use we proposed that EPs and eligible hospitals test their ability to send such information at least once prior to the end of the EHR reporting period. We proposed that the testing could occur prior to the beginning of the EHR reporting period. We also said that if multiple EPs are using the same certified EHR technology in a shared physical setting, the testing would only have to occur once for a given certified EHR technology, as we do not see any value to running the same test multiple times just because multiple EPs use the same certified EHR technology. Finally, we attempted to define an "exchange" as the clinical information must be sent between different clinical entities with distinct certified EHR technology and not between organizations that share a certified EHR. We received many comments requesting further clarification on these concepts and we attempt to provide additional information in the comment and response section below.

Comment: Commenters expressed concern that the receiving entities are not required to have the same capabilities as meaningful users of certified EHR technology.

Response: The HITECH Act does not provide us the authority to require any entity (medical provider or otherwise) to conform to certain standards and criteria unless they seek to become a meaningful EHR user. The Act also limits the entities that are eligible to become meaningful EHR users. In developing the associated measure for this objective, we have ensured that eligible providers will be able to meet this objective as long as there is one other entity with which they can test their capability. As electronic exchange is not constrained by distance, we are confident that every provider seeking to test their system will be able to find another entity with which to conduct such test.

Comment: Commenters asked whether the test needs to be "live" or if it could be a "simulation."

Response: As specified in the proposed rule, this test must involve the actual submission of information to another provider of care with distinct certified EHR technology or other system capable of receiving the information.

Comment: Commenters asked whether the use of "test" or "dummy" data is permissible.

Response: While the use of test patient information may increase the risk that the system will not be testing to its full capability, given the privacy and security concerns surrounding the transmission of actual patient information we do not require it for the purposes of a test. Therefore, the use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient would satisfy this objective.

Comment: Commenters suggested deferring the measure to a later stage due to the lack of a mature HIE infrastructure and/or to emulate the Health Information and Management System Society (HIMSS) EMR Adoption Model.

Response: We agree that many areas of the country currently lack the infrastructure to support the electronic exchange of information. As the goal of this meaningful use objective is to ensure that certified EHR technology has the capability to electronically exchange key clinical information, we only require a single test.

After consideration of the public comments received, we are finalizing the meaningful use measure at § 495.6(d)(14)(ii) and § 495.6(f)(13)(ii) of our regulations as proposed.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.304(i) for EPs and 45 CFR 170.306(f) for eligible hospitals and CAHs. The ability to calculate the measure is included in certified EHR technology. EPs, eligible hospitals, and CAHs should attempt to identify one other entity with whom to conduct a test of the submission of electronic data. This test must include the transfer of either actual or "dummy" data to the chosen other entity. The testing could occur prior to the beginning of the EHR reporting period, but must occur prior to the end of the EHR reporting period and every payment year would require its own, unique test as infrastructure for health information exchange is expected to mature over time. Therefore, if an eligible hospital or CAH were to become a meaningful EHR user in 2011 for their first payment year, they would have to conduct another, unique test to become a meaningful EHR user in 2012 for their second payment year. If multiple EPs are using the same certified EHR technology in a shared physical setting, the testing would only have to occur once for a given certified EHR technology, as we do not see any value to running the same test multiple times just because multiple EPs use the same

certified EHR technology. To be considered an "exchange" for this objective and measure the clinical information must be sent between different legal entities with distinct certified EHR technology or other system that can accept the information and not between organizations that share certified EHR technology. CMS will accept a yes/no attestation to verify all of the above for EPs, eligible hospitals, and CAHs.

As the measure already accounts for the possibility of a failed test and we are confident that everyone will be identify an entity with which to conduct a test, we do not believe an exception is required for EPs, eligible hospitals or CAHs.

NPRM EP/Eligible Hospital Objective: Perform medication reconciliation at relevant encounters and each transition of care.

In the proposed rule, we described "medication reconciliation" as the process of identifying the most accurate list of all medications that the patient is taking, including name, dosage, frequency and route, by comparing the medical record to an external list of medications obtained from a patient, hospital or other provider. We maintain this description for the final rule. We also described "relevant encounter" and "transition of care"; however, as we received comments requested additional clarification of these terms we address them in the comment and response section below.

Comment: Several commenters requested that this objective be deferred until it can be conducted using the exchange of electronic information between certified EHR technology. Other commenters believed that the process is not one for avoiding medication errors, but a human workflow process supported by the EHR, and not an automated EHR process.

Response: We certainly look forward to a time when most medication reconciliation occurs as an automated process within the EHR reconciling information that has been exchanged. However, it is unlikely that an automated process within the EHR will fully supplant the medication reconciliation conducted between the provider and the patient. In order for this automated reconciliation process to occur and be useful, the relevant structured data exchanged needs to be as accurate as possible. Requiring medication reconciliation as part of meaningful use in Stage 1 lays the groundwork for future reliable electronic exchange. We therefore do not believe this objective should be deferred to a later stage.

Comment: Commenters requested additional clarity of the term "relevant encounter." Only a few suggestions on such clarity were provided by commenters. Two examples of commenters' recommendations are "when a prescription is generated" and "a significant change in the patient's condition that resulted in change in medication regimen which could include significant change in dosing of more than 1 medication, identification of a new medical condition, decline in functional status or change in advanced directive."

Response: We finalize our proposal by defining "relevant encounter" as an encounter during which the EP, eligible hospital or CAH performs a medication reconciliation due to new medication or long gaps in time between patient encounters or for other reasons determined appropriate by the EP, eligible hospital or CAH. Essentially an encounter is relevant if the EP, eligible hospital, or CAH judges it to be so. This flexibility has implications for the measure that were not fully considered in the proposed rule. We will discuss those below in connection with our discussion of the associated measure.

Comment: Commenters requested additional clarity of the term "transition of care." A few suggestions were provided by commenters including expanding the description to include all transfers to different settings within a hospital or revising the definition to "the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another".

Response: In the proposed rule we clarified "transition of care" as the transfer of a patient from one clinical setting (inpatient, outpatient, physician office, home health, rehab, long-term care facility, etc.) to another or from one EP, eligible hospital, or CAH (as defined by CCN) to another. We believe that different settings within one hospital using certified EHR technology would have access to the same information so reconciliation would not be necessary. We modify our clarification to account for some of the revisions provided. We clarify "transition of care" as the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another. We also clarify that the receiving eligible hospital or EP would conduct the medication reconciliation.

Comment: Some commenters requested clarification on which EP, eligible hospital or CAH would conduct the medication reconciliation. The one to whom the patient is transferred or the one who transfers the patient.

Response: When conducting medication reconciliation during a transfer of care, we believe that it is the EP, eligible hospital or CAH that receives the patient into their care that should conduct the medication reconciliation. It is for this provider that the information is most crucial, as they will be making the future clinical judgments regarding the patient. Therefore, we revise this objective and its associated measure to reflect this clarification.

Comment: Commenters requested a standard list be defined for the process including prescription and non prescription medications, herbal products, dietary supplements, prescriber, drug name, regimen and allergies.

Response: We believe the information included in the process of medication reconciliation is appropriately determined by the provider and patient.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(e)(7)(i) and for eligible hospitals and CAHs at § 495.6(g)(6)(i) of our regulations to "The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation".

NPRM EP/Eligible Hospital Measure: Perform medication reconciliation for at least 80 percent of relevant encounters and transitions of care.

Comment: Commenters believed it was an unjustifiable burden to record which encounters were relevant and which were not given our flexible definition of "relevant encounter".

Response: We agree that the inclusion of relevant encounters creates a burden that one commenter described as "non-value-added work". We also believe that when the EP, eligible hospital, or CAH identifies the encounter as relevant, it is unlikely that the EP, eligible hospital, or CAH would then not carry out the medication reconciliation. For these reasons, we are removing relevant encounters from the measure for this objective.

Comment: Commenters said the percent measurements should be replaced with a numerical count or an attestation the objective has been met or the demonstration of the capability by performing one test of certified EHR technology's capacity to present

providers with patient medication information that supports the reconciliation of medications at time of admission and discharge. Other commenters stated the proposed 80 percent threshold was too high.

Response: We are maintaining a percentage for the reasons discussed previously in this section. However, we do reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and while not absolutely reliant on electronic exchange of information, it does involve the exchange of information between providers and therefore we adopt a threshold of 50 percent (rather than 8 percent).

Comment: Commenters requested we align this objective with The Joint Commission National Patient Safety Goal on medication reconciliation (Goal 8) in order to decrease confusion, prevent the slowing of adoption of best practices and match current hospital reconciliation processes.

Response: CMS understands the commenters' concerns regarding possible confusion if the meaningful use medication reconciliation requirement differs from The Joint Commission's requirement for those facilities accredited by that organization. However, currently there is no finalized Joint Commission standard as the Commission is currently in the process of re-evaluating their National Patient Safety Goal 8 (Accurately and completely reconcile medications across the continuum of care) given the difficulties that many organizations are having in meeting the complex requirements. In the absence of a definitive Joint Commission standard to take into consideration, this is not possible.

Comment: Some commenters expressed the desire to expand the scope of the measure to include the clinical decision making and patient counseling and education by a pharmacist.

Response: We believe that is both beyond the scope of meaningful use as pharmacists are not eligible professionals for the EHR incentive programs and that the provision of patient counseling is more aligned with the objectives of clinical quality measures. Information from the medication reconciliation could be used for the basis of clinical decision support rules, but is not in and of itself a clinical decision.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(7)(ii) and for eligible hospitals and CAHs at § 495.6(g)(6)(ii) of our regulations to "The EP, eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(j). The ability to calculate the measure is included in certified EHR technology.

As discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, we only include in the denominator transitions of care related to patients whose records are maintained using certified EHR technology. To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of transitions of care during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 to 23) was the receiving party of the transition.
- *Numerator:* The number of transitions of care in the denominator where medication reconciliation was performed.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure. If an EP was not on the receiving end of any transition of care during the EHR reporting period they would be excluded as previously discussed in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We do not believe that any eligible hospital or CAH would be in a situation where they would not need to know the precise medications their patients are taking.

NPRM EP/Eligible Hospital Objective: Provide summary care record for each transition of care or referral.

In the proposed rule, we pointed out that this objective was not explicitly included in the HIT Policy Committee's recommended objectives, but that they did include a measure for the "percent of transitions in care for which summary care record is shared." We said that we believe that in order for a measure to be relevant it must correspond to an objective in the definition of meaningful use. Therefore, we proposed to add this objective in order to be able to include the recommended measure. Furthermore, we add referrals because the sharing of the patient care summary from one provider to another communicates important information that the patient may not have been able to provide, and can significantly improve the quality and safety of referral care, and reduce unnecessary and redundant testing. We received support for this inclusion from commenters and include this objective in the final rule for the reasons outlined in the proposed rule. We did receive comments requesting clarifications around this objective and address them in the comment and response section below.

Comment: We received several comments that requested clarification as to the purpose of this objective.

Response: The purpose of this objective is to ensure a summary of care record is provided to the receiving provider when a patient is transitioning to a new provider or has been referred to another provider while still remaining under the care of the referring provider. If the provider to whom the referral is made or to whom the patient is transitioned to has access to the medical record maintained by the referring provider then the summary of care record would not need to be provided. The most common example cited by commenters was a referral during which patient remains an inpatient of the hospital. Finally, unlike with medication reconciliation, where the receiving party of the transfer conducts the action, the transferring party would provide the summary care record to the receiving party.

Comment: Commenters requested additional clarity of the term "transition of care". A few suggestions were provided by the commenters including expanding the description to include all transfers to different settings within a hospital or revising the definition to "the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory, specialty care practice, long-term care, home health, rehabilitation facility) to another".

Response: In the proposed rule we clarified that the term transition of care means a transfer of a patient from one clinical setting (inpatient, outpatient, physician office, home health, rehab, long-term care facility, etc.) to another or from one EP, eligible hospital, or CAH (as defined by CMS Certification Number (CCN) to another. We believe that different settings within a hospital using certified EHR technology would have access to the same information so

providing a clinical care summary would not be necessary. We further clarify transition of care as the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory, specialty care practice, long-term care, home health, rehabilitation facility) to another.

Comment: Some commenters requested clarification on which EP, eligible hospital or CAH should provide the summary of care document; the one to whom the patient is transferred or referred or the one who transfers or refers the patient.

Response: We believe that it is the EP, eligible hospital or CAH that transfers or refers the patient to another setting of care or provider that should provide the summary of care document. It is for this provider that has the most recent information on the patient that may be crucial to the provider to whom the patient is transferred or referred. Therefore, we revise this objective and its associated measure to reflect this clarification.

Comment: Commenters asked for clarification on how the summary of care record should be transferred.

Response: The goal is to get the summary care record into the next provider's possession. While we highly encourage all EPs, eligible hospitals, and CAHs to explore ways to accomplish the transfer using electronic exchange, we realize that this capability is still in the development stages. Therefore, an EP, eligible hospital, or CAH could send an electronic or paper copy of the summary care record directly to the next provider or could provide it to the patient to deliver to the next provider, if the patient can reasonably expected to do so. Certified EHR technology would be used to generate the summary of care record and to document that it was provided to the patient or receiving provider.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(e)(8)(i) and for eligible hospitals and CAHs at § 495.6(g)(7)(i) of our regulations to "The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral".

NPRM EP/Eligible Hospital Measure: Provide summary of care record for at least 80 percent of transitions of care and referrals.

Comment: Commenters said that this should be replaced with a count and that the threshold was too high.

Response: We are maintaining a percentage for the reasons discussed previously in this section. However, we do reduce the threshold to over 50 percent as this objective meets the criteria of relying solely on a capability included as part of certified EHR technology and while not absolutely reliant on electronic exchange of information, it does involve the exchange of information between providers and therefore we adopt a threshold of 50 percent (rather than 80 percent).

Comment: There were concerns about the ability of certified EHR technology to calculate this measure. As long as an EP, eligible hospital, or CAH records the order for a referral or transfer as structured data and a record is made that the summary care record was provided then certified EHR technology will be able to calculate this measure.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(8)(ii) and for eligible hospitals and CAHs at § 495.6(g)(7)(ii) of our regulations to "The EP, eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology included as specified and standards at 45 CFR 170.304(i) for EPs and 45 CFR 170.306(f) for eligible hospitals and CAHs. The ability to calculate the measure is included in certified EHR technology.

As discussed previously in this section under our discussion of the burden created by the measures associated with the Stage 1 meaningful use objectives, we only include in the denominator transitions of care and referrals related to patients whose records that are maintained using certified EHR technology. To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- Denominator: Number of transitions of care and referrals during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 to 23) was the transferring or referring provider.
- Numerator: The number of transitions of care and referrals in the denominator where a summary of care record was provided.
- Threshold: The percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure.

As addressed in other objectives and in comment response, if an EP does not transfer a patient to another setting or refer a patient to another provider during the EHR reporting period then they would have a situation of a null denominator as described would be excluded from this requirement as described previously in this section under our discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. We do not believe that any eligible hospital or CAH would be in a situation where they would never transfer a patient to another care setting or make a referral to another provider.

The fourth health outcomes policy priority identified by the HIT Policy Committee is improving population and public health. The HIT Policy Committee identified the following care goal to address this priority:

- The patient's health care team communicates with public health agencies.

The goal as recommended by the HIT Policy Committee is "communicate with public health agencies." In the proposed rule, we explained that we found this goal to be somewhat ambiguous, as it does not specify who must communicate with public health agencies. We propose to specify "the patient's health care team" as the individuals who would communicate with public health agencies.

NPRM EP/Eligible Hospital Objective: Capability to submit electronic data to immunization registries and actual submission where required and accepted.

In the proposed rule, we did not elaborate on this objective.

Comment: Some commenters suggested out that not every EP, eligible hospital, or CAH administers immunization. Therefore, as proposed, this objective and its associated measure would require an EP, eligible hospital, or CAH to implement and test a capability that they would not use.

Response: We acknowledge that this objective is not relevant to all EPs, eligible hospitals or CAHs. Therefore, in this final rule, we clarify that this objective and its associated measure apply only to EPs, eligible hospitals or CAHs that administer one or more immunizations during the EHR reporting period.

Comment: Some commenters recommended revising the language of the immunization objective to be consistent with the language of the syndromic surveillance objective by

replacing "where required and accepted" with "according to applicable law and practice."

Response: First, we make a technical correction. The objective listed for EPs on page 1858 of the proposed rule listed this objective as "Capability to submit electronic data to immunization registries and actual submission where possible and accepted." The objective was intended to be "Capability to submit electronic data to immunization registries and actual submission where required and accepted" for EPs, eligible hospitals, and CAHs. It is written as such in every other instance in the proposed rule including the regulation text. Second, in response to the comment that "where required and accepted" be replaced with "according to applicable law and practice", we see little distinction between the two in terms of requirement as applicable law and practice would be the things imposing a requirement. Therefore, we adopt the proposed language, but modify the language slightly to "in accordance with applicable law and practice". We do note however, that applicable law and practice do not guarantee every receiving entity will be able to accept it electronically. Our measure for meeting this objective is one test of electronic data submission and if the test is successful follow up submission to that one entity. We do not seek to enforce through meaningful use every law and practice that may require submission of immunization data. We also make another consistency change to the objectives under the health care policy goal of improving population and public health. In this objective, we describe the capability as submitting electronic data. In the other objectives under this goal we describe the capability as providing electronic data. We believe that functionally these terms are interchangeable, but to avoid any confusion we adopt the same term of "submit" electronic data across all three objectives.

Comment: Some commenters suggested that the term "Immunization Information Systems (IIS)" has replaced the term "registry" and is referred to as such by the Centers for Disease Control (CDC).

Response: We modified the objective to account for both terms. After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(e)(9)(i) and for eligible hospitals and CAHs at § 495.6(g)(8)(i) of our regulations to Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with to applicable law and practice.

NPRM EP/Eligible Hospital Measure: Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries (unless none of the immunization registries to which the EP, eligible hospital, or CAH submits such information have the capacity to receive the information electronically).

In the proposed rule, we identified this as an objective where more stringent requirements may be established for EPs and hospitals under the Medicaid program in states where this capability exists. This is just one example of a possible State proposed modification to meaningful use in the Medicaid EHR incentive program. This ability for the States is also included in our final rule.

Comment: As with the objective of exchanging key clinical information, some commenters asked whether the test needs to be "live" or if it could be a "simulation". Some commenters suggested that a simulation where the ability was tested without being transmitted to another party should be sufficient. Others suggested that the test needs to include transmission or difficulties in actual sending information might not be uncovered.

Response: As specified in the proposed rule, this test must involve the actual submission of information to a registry or immunization information system, if one exists that will accept the information.

Comment: Commenters asked whether the use of "test" or "dummy" data is permissible.

Response: While the use of test patient information may increase the risk that the system will not be testing to its full capability, given the privacy and security concerns surrounding the transmission of actual patient information we do not require it for the purposes of a test. Therefore, the use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient would satisfy this objective. However, we note that this is one of the objectives that a State may modify in accordance with the discussion in II.A.2.c. of the proposed rule. Therefore, more stringent requirements may be established for EPs and eligible hospitals under the Medicaid program in states where this capability exists.

Comment: Commenters expressed concern about the burden of multiple requirements for submission from Federal, State, and local government agencies or non-governmental registries. They also raised the issue of lack of standardization of means and form of submission.

Response: Standards for content exchange and vocabulary are established in the ONC final rule at 45 CFR 170.302(k). As meaningful use seeks to utilize certified EHR technology for purposes of the test and subsequent submission (if test was successful) these are the standards that should be utilized. While we encourage all providers and registries to work together to develop efficient, electronic submission of immunization information to all registries where it can be used to improve population and public health, for purposes of becoming a meaningful EHR user, we only require a single test and follow up submission if that test is successful.

Comment: Commenters suggested deferring the measure to a later stage due to the lack of a mature HIE infrastructure.

Response: We agree that many areas of the country currently lack the infrastructure to support the electronic exchange of information. As meaningful use seeks to ensure certified EHR technology has the capability to submit electronic data to registries, we only require a single test if a receiving entity is available and follow up submission only if that test is successful. If none of the immunization registries to which the EP, eligible hospital or CAH submits information has the capacity to receive the information electronically, then this objective would not apply.

Comment: Commenters requested clarification whether on a failed attempted test satisfies the criteria of this measure and whether EPs in a group setting using identical certified EHR technology would only need to conduct a single test, not one test per EP.

Response: A failed attempt would meet the measure. We highly encourage EPs, eligible hospitals, and CAHs to work with their vendor and the receiving entity with whom they tested to identify the source of the failure and develop remedies, but for Stage 1 of meaningful use a failed attempt would meet the requirements. We had indicated in the proposed rule that only one test is required for EPs practicing in a group setting that shares the same certified EHR technology. We maintain that proposal for the final rule.

Comment: Commenters recommended the inclusion of electronically reporting to other types of registries in addition to immunization registries such as disease-specific registries such as the Cystic Fibrosis Registry.

Response: While we encourage all providers and registries to work together

to develop efficient, electronic submission of information to all registries where it can be used to improve population and public health, for purposes of becoming a meaningful EHR user, we only require a single test utilizing immunization data and follow up submission if that test is successful.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(9)(ii) and for eligible hospitals and CAHs at § 495.6(g)(8)(ii) of our regulations to "Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital, or CAH submits such information have the capacity to receive the information electronically)".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(k). The ability to calculate the measure is included in certified EHR technology. We require that an EP, eligible hospital, or CAH determine if they have given any immunizations during the EHR reporting period. Those that have not given any immunizations during the EHR reporting period are excluded from this measure according to the discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices. If they have given immunizations during the reporting period, they should then attempt to locate a registry or IIS with whom to conduct a test of the submission of electronic data. This test must include the transfer of either actual or "dummy" data to the chosen registry or IIS. The testing could occur prior to the beginning of the EHR reporting period, but must occur prior to the end of the EHR reporting period. EPs in a group setting using identical certified EHR technology would only need to conduct a single test, not one test per EP. If the test is successful, then the EP, eligible hospital, or CAH should institute regular reporting to that entity in accordance with applicable law and practice. CMS will accept a yes/no attestation to verify all of the above for EPs, eligible hospitals or CAHs that have administered immunizations during the EHR reporting period.

NPRM Eligible Hospital Objective: Capability to provide electronic submission of reportable (as required by state or local law) lab results to public health agencies and actual submission where it can be received.

In the proposed rule, we did not elaborate on this objective.

Comment: A few commenters requested this objective be applied to EPs as long as the EHR Certification requirements are met. A commenter remarked that electronic submission of reportable lab results should not put an additional burden on the providers as the EHR would be able to automate this process.

Response: We based the limitation on the recommendation of the HIT Policy Committee who in turn went through a considerable public development process. We do not believe that burden of reporting was the only limiting factor in keeping this objective from being applied to EPs; therefore, we maintain our proposal to limit this objective to eligible hospitals and CAHs. EPs usually send out lab test to other organizations on which reporting burdens may fall.

Comment: Commenters requested that the actual transmission of the information be required.

Response: In the discussion of the reporting immunization data objective, we discussed at length the need to align the language for the three objectives included under the health care policy priority of improve population and public health, which is one of the five priorities of the Stage 1 definition of meaningful use. Our interpretation is that the three phrases result in the same outcome, but introduce confusion due to the varied wordings. As commenters strongly preferred the phrase "according to applicable law and practice", we will so modify this objective. We do note however that applicable law and practice does not guarantee every receiving entity will be able to accept it electronically. Our measure for meeting this objective is one test of electronic data submission and if the test is successful, a follow up submission to that one entity. We do not seek to enforce through meaningful use every law and practice that may require submission of lab results.

After consideration of the public comments received, we are modifying the meaningful use objective for eligible hospitals and CAHs at § 495.6(g)(9)(i) of our regulations to "Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice".

NPRM Eligible Hospital Measure: Performed at least one test of certified EHR technology capacity to provide electronic submission of reportable lab results to public health agencies (unless none of the public health agencies to which eligible hospital submits such information have the capacity to receive the information electronically).

In the proposed rule, we identified this as an objective where more stringent requirements may be established for eligible hospitals under the Medicaid program in states where this capability exists. This is just one example of a possible State proposed modification to

Comment: Commenters asked whether the test needs to be "live" or if it could be a "simulation".

Response: As specified in the proposed rule, this test must involve the actual submission of information to a public health agency, if one exists that will accept the information.

Comment: Commenters asked whether the use of "test" or "dummy" data is permissible.

Response: While the use of test patient information may increase the risk that the system will not be testing to its full capability, given the privacy and security concerns surrounding the transmission of actual patient information we do not require it for the purposes of a test. Therefore, the use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient would satisfy this objective. However, we note that this is one of the objectives that a State may modify as discussed previously in this section. Therefore, more stringent requirements may be established for EPs and eligible hospitals under the Medicaid program in states where this capability exists.

Comment: Commenters requested that one national standard be established for reporting lab results to public health agencies.

Response: Standards for content exchange and vocabulary are established in the ONC final rule at 45 CFR 170.306(g). While we encourage all providers and public health agencies to work together to develop efficient, electronic submission of reportable lab results to all public health agencies, for purposes of becoming a meaningful EHR user, we only require a single test and follow up submission if that test is successful.

Comment: Commenters suggested deferring the measure to a later stage due to the lack of a mature HIE infrastructure and lack of a clear standard for exchanging bio-surveillance data.

Response: We agree that many areas of the country currently lack the infrastructure to support the electronic exchange of information. As meaningful use seeks to ensure certified EHR

technology has the capability to submit electronic data to public health agencies, we only require a single test if a receiving entity is available and follow up submission only if that test is successful.

After consideration of the public comments received, we are modifying the meaningful use measure for eligible hospitals and CAHs at § 495.6(g)(9)(ii) of our regulations to "Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)".

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.306(g). The ability to calculate the measure is included in certified EHR technology. Eligible hospitals and CAHs should attempt to identify one public health agency with whom to conduct a test of the submission of electronic data. This test must include the transfer of either actual or "dummy" data to the chosen public health agency. The testing could occur prior to the beginning of the EHR reporting period, but must occur prior to the end of the EHR reporting period. If the test is successful, then the eligible hospital or CAH should institute regular reporting to that entity according to applicable law and practice. CMS will accept a yes/no attestation to verify all of the above for eligible hospitals and CAHs.

NPRM EP/Eligible Hospital Objective: Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice.

In the proposed rule, we did not elaborate on this objective.

Comment: Half of the commenters commenting on this objective recommended that the objective be deferred to Stage 2 or 3 as the objective is considered expensive, complex and imposes significant administrative burdens on EPs, eligible hospitals and CAHs unless the certified EHR technologies support the automate, electronic capture of the requisite data.

Response: The measure for this objective accounts for the possibility that such electronic exchange of syndromic data is not possible. Standards and certification for certified EHR technologies are covered under the ONC final rule and do support the automatic identification of the requisite data and its electronic capture. This greatly limits the cost, complexity and burden of this objective.

Comment: Commenters requested that an actual transmission be required.

Response: In discussing the reporting immunization data objective, we focused on the need to align the language for the three objectives contained in under the health care policy priority of improving population and public health. Our interpretation is that the three phrases result in the same outcome, but introduce confusion with the current language. We adopted the language from this objective for the others. We do note however that applicable law and practice does not guarantee every receiving entity will be able to accept it electronically. Our measure for meeting this objective is one test of electronic data submission and if the test is successful, then follow up submission to that one entity based on the reporting requirements of that entity. We do not seek to enforce through meaningful use every law and practice that may require submission of lab results.

Comment: Some commenters requested a clarification of the term "public health agencies."

Response: A public health agency is an entity under the jurisdiction of the U.S. Department of Health and Human Services, tribal organization, State level and/or city/county level administration that serves a public health function.

Comment: Some commenters recommended that providers be required to satisfy either electronic submission to immunization registries or electronic submission of syndromic surveillance data to a public health agency, but not both.

Response: We disagree. We believe these are fundamentally different types of information. Each may impose unique requirements in terms of ability to exchange information on both the EP, eligible hospital, or CAH and the receiving entity. Therefore, a test for one does not prove or disprove the ability to exchange information for the other.

After consideration of the public comments received, we are modifying the meaningful use objective for EPs at § 495.6(e)(10)(i) and eligible hospitals and CAHs at § 495.6(g)(10(i) of our regulations to "Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice."

NPRM EP/Eligible Hospital Measure: Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies (unless none of the public health agencies to which an EP, eligible hospital, or CAH submits such information have the capacity to receive the information electronically).

In the proposed rule, we identified this as an objective where more stringent requirements may be established for EPs and hospitals under the Medicaid program in states where this capability exists. This is just one example of a possible State proposed modification to meaningful use.

First, a technical correction, in the proposed rule we incorrectly stated that the capability to send electronic data to immunization registries was included in the certification standards for certified EHR technology. We intended for this data to be sent to public health agencies and ONC in their final rule at 45 CFR 170.304(l) correctly stated this capability as such.

Comment: Commenters asked whether the test needs to be "live" or if it could be a "simulation".

Response: As specified in the proposed rule, this test must involve the actual submission of information to a public health agency, if one exists that will accept the information.

Comment: Commenters asked whether the use of "test" or "dummy" data is permissible.

Response: While the use of test patient information may increase the risk that the system will not be testing to its full capability, given the privacy and security concerns surrounding the transmission of actual patient information we do not require it for the purposes of a test. Therefore, the use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient would satisfy this objective. However, we note that this is one of the objectives that a State may modify in accordance with the discussion in II.A.2.c. of the proposed rule. Therefore, more stringent requirements may be established for EPs and eligible hospitals under the Medicaid program in states where this capability exists.

Comment: A few commenters expressed confusion as to the required ferquency of the test.

Response: As stated in the proposed rule, the required frequency of a test in Stage 1 for EPs, eligible hospitals, and CAHs is at least once prior to the end of the EHR reporting period. We further clarify that each payment year would require it own unique test.

Comment: Commenters requested that one national standard be established for

reporting syndromic surveillance data to public health agencies.

Response: Standards for content exchange and vocabulary are established in the ONC final rule. While we encourage all providers and public health agencies to work together to develop efficient, electronic submission of syndromic surveillance data to all public health agencies, for purposes of becoming a meaningful EHR user, we only require a single test and follow up submission if that test is successful.

Comment: Commenters suggested deferring the measure to a later stage due to the lack of a mature HIE infrastructure.

Response: We agree that many areas of the country currently lack the infrastructure to support the electronic exchange of information. As meaningful use seeks to ensure certified EHR technology has the capability to submit electronic data to public entities, we only require a single test if a receiving entity is available and follow up submission only if that test is successful. We note that this measure only applies if there is a public health agency with the capacity to receive this information.

Comment: Commenters requested clarification on whether a failed attempted test satisfies the measure and whether EPs in a group setting using identical certified EHR technology would only need to conduct a single test, not one test per EP.

Response: A failed attempt would meet the measure. We highly encourage EPs, eligible hospitals, and CAHs to work with their vendor and the receiving entity with whom they tested to identify the source of the failure and develop remedies, but for Stage 1 of meaningful use a failed attempt would meet the requirements. We had indicated in the proposed rule that only on test is required for EPs practicing in a group setting that shares the same certified EHR technology. We maintain that proposal for the final rule.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(e)(10)(ii) and eligible hospitals and CAHs at § 495.6(g)(10)(ii) of our regulations to "Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP, eligible hospital, or CAH submits such information have the capacity to receive the information electronically.)"

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities Certified EHR Technology includes as specified and standards at 45 CFR 170.302(l). The ability to calculate the measure is included in certified EHR technology. EPs, eligible hospitals, and CAHs should attempt to identify one public health agency with whom to conduct a test of the submission of electronic data. This test must include the transfer of either actual or "dummy" data to the chosen public health agency. The testing could occur prior to the beginning of the EHR reporting period, but must occur prior to the end of the EHR reporting period. If the test is successful, then the EP, eligible hospital, or CAH should institute regular reporting to that entity according to applicable law and practice. CMS will accept a yes/no attestation to verify all of the above for eligible hospitals and CAHs.

If an EP does not collect any reportable syndromic information on their patients during the EHR reporting period, then they are excluded from this measure according to the discussion of whether certain EP, eligible hospital or CAH can meet all Stage 1 meaningful use objectives given established scopes of practices.

The fifth health outcomes policy priority is to ensure adequate privacy and security protections for personal health information. The following care goals for meaningful use address this priority:

- Ensure privacy and security protections for confidential information through operating policies, procedures, and technologies and compliance with applicable law.
- Provide transparency of data sharing to patient.

NPRM EP/Eligible Hospital Objective: Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.

In the proposed rule, we discussed how we were relating the objectives presented by the HIT Policy committee more tightly to the meaningful use of certified EHR technology as opposed to the broader success of the EP, eligible hospital or CAH in ensuring privacy and security. The primary reason we gave was that the proper vehicle for ensuring privacy and security is the HIPAA Privacy and Security Act and that we sought with this objective to ensure that certified EHR technology does not impede an EP's, eligible hospital's or CAH's ability to comply with HIPAA.

Comment: We received considerable support from many commenters who supported this objective and measure as proposed.

Response: We appreciate the support of these commenters for our proposed objective and measure.

Comment: Commenters requested clarification of appropriate technical capabilities.

Response: The ONC final rule specifies certain capabilities that must be in certified EHR technology. For the objective we simply mean that a technical capability would be appropriate if it protected the electronic health information created or maintained by the certified EHR technology. All of these capabilities could be part of the certified EHR technology or outside systems and programs that support the privacy and security of certified EHR technology. We could not develop an exhaustive list. Furthermore as we state in the proposed rule compliance with HIPAA privacy and security rules is required for all covered entities, regardless of whether or not they participate in the EHR incentive programs. Furthermore, compliance with the HIPAA Privacy and Security Rules constitutes a wide range of activities, procedures and infrastructure. We rephrased the objective to ensure that meaningful use of the certified EHR technology supports compliance with the HIPAA Privacy and Security Rules and compliance with fair sharing data practices outlined in the Nationwide Privacy and Security Framework (*http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS__0__10731__848088__0__0__18/NationwidePS__Framework-5.pdf*), but do not believe meaningful use of certified EHR technology is the appropriate regulatory tool to ensure such compliance with the HIPAA Privacy and Security Rules.

Comment: Several commenters urged CMS not to finalized requirements for the fair data sharing practices set forth in the Nationwide Privacy and Security Framework and to clarify the policies to which CMS is referring.

Response: While we stated in the proposed rule we rephrased the objective to ensure "compliance with fair sharing data practices outline in the Nationwide Privacy and Security Framework," we did not propose any practices or policies related to the Nationwide Privacy and Security Framework and do not finalize any in this final rule.

Comment: Several commenters requested the elimination of this objective as redundant to HIPAA.

Response: We do not see meaningful use as an appropriate regulatory tool to impose different, additional, and/or inconsistent privacy and security policy requirements from those policies already required by HIPAA. With that said, we do feel it is crucial that EPs, eligible hospitals, and CAHs evaluate the impact certified EHR technology has on their compliance with HIPAA and the protection of health information in general. Therefore, we retain this objective and measure for meaningful use in the final rule.

Comment: We received hundreds of comments that requested the cancelation of the EHR incentive payment program due to the privacy and security risks imposed by the implementation and use of certified EHR technology.

Response: We are required by the ARRA to implement the EHR incentive programs and cannot cancel them. We seek to mitigate the risks to the security and privacy of patient information by requiring EPs, eligible hospitals, and CAHs to conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a)(1) and implement security updates as necessary.

After consideration of the public comments received, we are finalizing the meaningful use objective for EPs at § 495.6(d)(15)(i) and eligible hospitals and CAHs at § 495.6(f)(14)(i) of our regulations as proposed.

We include this objective in the core set. We believe maintaining privacy and security is crucial for every EP, eligible hospital or CAH that uses certified EHR technology and was recommended by the HIT Policy Committee for inclusion in the core set.

NPRM EP/Eligible Hospital Measure: Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308 (a)(1) and implement security updates as necessary.

In the proposed rule, we discussed the role of certified EHR technology in privacy and security. We said that while certified EHR technology provides tools for protecting health information, it is not a full protection solution. Processes and possibly tools outside the scope of certified EHR technology are required. Therefore, for the Stage 1 criteria of meaningful use we propose that EPs and eligible hospitals conduct or review a security risk analysis of certified EHR technology and implement updates as necessary at least once prior to the end of the EHR reporting period and attest to that conduct or review. The testing could occur prior to the beginning of the EHR reporting period. This is to ensure that the certified EHR technology is playing its role in the overall strategy of the EP or eligible hospital in protecting health information. We have maintained this discussion for the final rule, but modified the measure to account for requests discussed in the comment and response section below.

Comment: Some commenters requested clarification of the phrase "implement security updates as necessary".

Response: A security update would be required if any security deficiencies were identified during the risk analysis. A security update could be updated software for certified EHR technology to be implemented as soon as available, to changes in workflow processes, or storage methods or any other necessary corrective action that needs to take place in order to eliminate the security deficiency or deficiencies identified in the risk analysis. To provide better clarity on this requirement, we are modifying the measure.

After consideration of the public comments received, we are modifying the meaningful use measure for EPs at § 495.6(d)(15)(ii) and eligible hospitals and CAHs at § 495.6(f)(14)(ii) of our regulations "Conduct or review a security risk analysis per 45 CFR 164.308(a)(1) of the certified EHR technology, and implement security updates and correct identified security deficiencies as part of its risk management process."

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Table 2: Stage 1 Meaningful Use Objectives and Associated Measures Sorted by Core and Menu Set

CORE SET			
Health Outcomes Policy Priority	**Stage 1 Objectives**		**Stage 1 Measures**
	Eligible Professionals	**Eligible Hospitals and CAHs**	
Improving quality, safety, efficiency, and reducing health disparities	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30% of unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE
	Implement drug-drug and drug-allergy interaction checks	Implement drug-drug and drug-allergy interaction checks	The EP/eligible hospital/CAH has enabled this functionality for the entire EHR reporting period
	Generate and transmit permissible prescriptions electronically (eRx)		More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology
	Record demographics o preferred language o gender o race o ethnicity o date of birth	Record demographics o preferred language o gender o race o ethnicity o date of birth o date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data
	Maintain an up-to-date problem list of current and active diagnoses	Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data

	Maintain active medication list	Maintain active medication list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
	Maintain active medication allergy list	Maintain active medication allergy list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data
	Record and chart changes in vital signs: o Height o Weight o Blood pressure o Calculate and display BMI o Plot and display growth charts for children 2-20 years, including BMI	Record and chart changes in vital signs: o Height o Weight o Blood pressure o Calculate and display BMI o Plot and display growth charts for children 2-20 years, including BMI	For more than 50% of all unique patients age 2 and over seen by the EP or admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structured data
	Record smoking status for patients 13 years old or older	Record smoking status for patients 13 years old or older	More than 50% of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data
	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance that rule	Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule	Implement one clinical decision support rule
	Report ambulatory clinical quality measures to CMS or the States	Report hospital clinical quality measures to CMS or the States	For 2011, provide aggregate numerator, denominator, and exclusions through attestation as discussed in section II(A)(3) of this

			final rule
			For 2012, electronically submit the clinical quality measures as discussed in section II(A)(3) of this final rule
Engage patients and families in their health care	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the EP or the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days
		Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request	More than 50% of all patients who are discharged from an eligible hospital or CAH's inpatient department or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it
	Provide clinical summaries for patients for each office visit		Clinical summaries provided to patients for more than 50% of all office visits within 3 business days
Improve care coordination	Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information
Ensure adequate privacy and security protections for personal health information	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process

MENU SET		
Health Outcomes	Stage 1 Objectives	Stage 1 Measures

Policy Priority	Eligible Professionals	Eligible Hospitals and CAHs	
Improving quality, safety, efficiency, and reducing health disparities	Implement drug-formulary checks	Implement drug-formulary checks	The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external drug formulary for the entire EHR reporting period
		Record advance directives for patients 65 years old or older	More than 50% of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) have an indication of an advance directive status recorded
	Incorporate clinical lab-test results into certified EHR technology as structured data	Incorporate clinical lab-test results into certified EHR technology as structured data	More than 40% of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data
	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition
	Send reminders to patients per patient preference for preventive/ follow up care		More than 20% of all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period
Engage patients and families in their health care	Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, medication allergies) within four business days of the information being available to the		More than 10% of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information

	EP		
	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources
Improve care coordination	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)
	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals
Improve population and public health[2]	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)

[2] Unless an EP, eligible hospital or CAH has an exception for all of these objectives and measures they must complete at least one as part of their demonstration of the menu set in order to be a meaningful EHR user.

		Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)
	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)

Table 3: Stage 1 Meaningful Use Objectives and Associated Measures Sorted by Method of Measure Calculation

Measures with a Denominator of Unique Patients Regardless of Whether the Patient's Records Are Maintained Using Certified EHR Technology		
Stage 1 Objectives		**Stage 1 Measures**
Eligible Professionals	**Eligible Hospitals and CAHs**	
Maintain an up-to-date problem list of current and active diagnoses	Maintain an up-to-date problem list of current and active diagnoses	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data
Maintain active medication list	Maintain active medication list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data
Maintain active medication allergy list	Maintain active medication allergy list	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data
Record demographics o Preferred language o Gender o Race o Ethnicity o Date of Birth	Record demographics o Preferred language o Gender o Race o Ethnicity o Date of Birth o Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data
Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, medication allergies) within four business days of the information being available to the EP		More than 10% of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information

Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources
Measures with a Denominator of Based on Counting Actions for Patients whose Records are Maintained Using Certified EHR Technology		
Stage 1 Objectives		**Stage 1 Measures**
Eligible Professionals	**Eligible Hospitals and CAHs**	
Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30% of unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE
Generate and transmit permissible prescriptions electronically (eRx)		More than 40% of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology
Record and chart changes in vital signs: o Height o Weight o Blood pressure o Calculate and display BMI o Plot and display growth charts for children 2-20 years, including BMI	Record and chart changes in vital signs: o Height o Weight o Blood pressure o Calculate and display BMI o Plot and display growth charts for children 2-20 years, including BMI	For more than 50% of all unique patients age 2 and over seen by the EP or admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structured data
Record smoking status for patients 13 years old or older	Record smoking status for patients 13 years old or older	More than 50% of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data
	Record advance directives for patients 65 years old or older	More than 50% of all unique patients 65 years old or older admitted to the eligible hospital have an indication of an advance directive status recorded
Incorporate clinical lab-test results into certified EHR technology as structured data	Incorporate clinical lab-test results into certified EHR technology as structured data	More than 40% of all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data

Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies), upon request	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request	More than 50% of all patients of the EP or the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days
	Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request	More than 50% of all patients who are discharged from an eligible hospital or CAH's inpatient department or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it
Provide clinical summaries for patients for each office visit		Clinical summaries provided to patients for more than 50% of all office visits within 3 business days
Send reminders to patients per patient preference for preventive/ follow up care		More than 20% of all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period
The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)
The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary of care record for each transition of care or referral	The EP, eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals
Measures Requiring Only a Yes/No Attestation		
Stage 1 Objectives		**Stage 1 Measures**
Eligible Professionals	**Hospitals**	
Implement drug-drug and drug-allergy interaction checks	Implement drug-drug and drug-allergy interaction checks	The EP/eligible hospital/CAH has enabled this functionality for the entire EHR reporting period

Implement drug-formulary checks	Implement drug-formulary checks	The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external drug formulary for the entire EHR reporting period
Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition
Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance that rule	Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule	Implement one clinical decision support rule
Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, medication allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information
Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)
	Capability to submit electronic data on reportable (as required by state or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology capacity's to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)
Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Capability to submit electronic syndromic surveillance data to public health agencies and actual submission in accordance with applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)

Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process

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3. Sections 4101(a) and 4102(a)(1) of the HITECH Act: Reporting on Clinical Quality Measures Using EHRs by EPs, Eligible Hospitals, and CAHs [3]

a. General

As discussed in the meaningful use background in section II.A.2.a. there are three elements of meaningful use. In this section, we discuss the third requirement: using certified EHR technology, the EP, eligible hospital, or CAH submits to the Secretary, in a form and manner specified by the Secretary, information for the EHR reporting period on clinical quality measures and other measures specified by the Secretary. The submission of other measures is discussed in section II.A.2.c of this final rule. The two other elements of meaningful use are discussed in section II.A.2.d.1 of this final rule.

b. Requirements for the Submission of Clinical Quality Measures by EPs, Eligible Hospitals, and CAHs

Sections 1848(o)(2)(B)(ii) and 1886(n)(3)(B)(ii) of the Act provide that the Secretary may not require the electronic reporting of information on clinical quality measures unless the Secretary has the capacity to accept the information electronically, which may be on a pilot basis.

In the proposed rule, we stated that we do not anticipate that HHS will complete the necessary steps for us to have the capacity to electronically accept data on clinical quality measures from EHRs for the 2011 payment year. We believe that it is unlikely that by 2011 there will be adequate testing and demonstration of the ability to receive the required transmitted information on a widespread basis. The capacity to accept information on clinical quality measures also would depend upon the Secretary promulgating technical specifications for EHR vendors with respect to the transmission of information on clinical quality measures sufficiently in advance of the EHR reporting period for 2011, so that adequate time has been provided either for such specifications to be certified, or for EHR vendors to code such specifications into certified systems. Therefore, for 2011, we proposed that Medicare EPs, eligible hospitals, and CAHs use an attestation methodology to submit summary information to us on clinical quality measures as a condition of demonstrating meaningful use of certified EHR technology, rather than electronic submission.

We proposed that from the Medicaid perspective, delaying the onset of clinical quality measures electronic reporting until 2012 addresses concerns about States having the ready infrastructure to receive and store clinical quality measures data before then. More importantly, we recognized that since Medicaid providers are eligible to receive incentive payments for adopting, implementing, or upgrading certified EHR technology, Medicaid providers may not be focused on demonstrating meaningful use until 2012 or later.

We stated that we anticipate that for the 2012 payment year we will have completed the necessary steps to have the capacity to receive electronically information on clinical quality measures from EHRs, including the promulgation of technical specifications for EHR vendors to use for obtaining certification of their systems. Therefore, for the Medicare EHR incentive program beginning in CY 2012 we proposed that an EP using a certified EHR technology or beginning in FY 2012 an eligible hospital or CAH using a certified EHR technology, as appropriate for clinical quality measures, must submit information on clinical quality measures electronically, in addition to submitting the other measures described in section II.2.d.2, in order for the EP, eligible hospital, or CAH to be a meaningful EHR user, regardless of whether CY 2012 is their first or second payment year. However, if the Secretary does not have the capacity to accept the information on clinical quality measures electronically in 2012, consistent with sections 1848(o)(2)(B)(ii) and 1886(n)(3)(B)(ii) of the Act, we will continue to rely on an attestation methodology for reporting of clinical quality measures as a requirement for demonstrating meaningful use of certified EHR technology for payment year 2012. We stated in the proposed rule that should we not have the capacity to accept information on clinical quality measures electronically in 2012, we would inform the public of this fact by publishing a notice in the **Federal Register** and providing instructions on how this information should be submitted to us.

We also are finalizing in this final rule that States must identify for us in their State Medicaid HIT Plans how they plan to accept data from Medicaid providers who seek to demonstrate meaningful use by reporting on clinical quality measures, either via attestation or via electronic reporting, subject to our prior approval. If they initiate their program by accepting attestations for clinical quality measures, they must also describe how they will inform providers of their timeframe to accept submission of clinical quality measures electronically. We expect that States will have the capacity to accept electronic reporting of clinical quality measures by their second year implementing their Medicaid EHR incentive program.

For purposes of the requirements under sections 1848(o)(2)(A)(iii) and 1886(n)(3)(iii) of the Act, we defined "clinical quality measures" to consist of measures of processes, experience, and/or outcomes of patient care, observations or treatment that relate to one or more quality aims for health care such as effective, safe, efficient, patient-centered, equitable, and timely care. We noted that certain statutory limitations apply only to the reporting of clinical quality measures, such as the requirement discussed in the previous paragraph prohibiting the Secretary from requiring the electronic reporting of information on clinical quality measures unless the Secretary has the capacity to accept the information electronically, as well as other statutory requirements for clinical quality measures that are discussed below in

[3] For purposes of this final rule, the term "eligible hospital" for the Medicaid EHR incentive program is inclusive of Critical Access Hospitals (CAHs) as defined in this final rule.

section II.A.3.c.1 of this final rule. These limitations apply solely to the submission of clinical quality measures, and do not apply to other measures of meaningful EHR use. The clinical quality measures on which EPs, eligible hospitals, or CAHs will be required to submit information using certified EHR technology, the statutory requirements and other considerations that were used to select these measures, and the reporting requirements are described below.

With respect to Medicaid EPs and eligible hospitals, we noted that section 1903(t)(6) of the Act recognizes that the demonstration of meaningful use may also include the reporting of clinical quality measures to the States. We proposed that in the interest of simplifying the program and guarding against duplication of meaningful use criteria, the clinical quality measures adopted for the Medicare EHR incentive program, would also apply to EPs and eligible hospitals in the Medicaid EHR incentive program.

Despite the statutory limitation prohibiting the Secretary from requiring the electronic submission of clinical quality measures in the Medicare EHR incentive program, if HHS does not have the capacity to accept this information electronically, as previously discussed, the Secretary has broad discretion to establish requirements for meaningful use of certified EHR technology and for the demonstration of such use by EPs, eligible hospitals, and CAHs. Although we proposed to require the electronic submission of information on clinical quality measures in 2012, we stated that we do not desire this to delay the use of certified EHR technology by EPs, eligible hospitals, and CAHs to measure and improve clinical quality. Specifically, we stated that using EHR functionalities that support measurement of clinical quality is critical to a central goal of the HITECH Act, improving health care quality. Measuring quality is a fundamental aspect of improving such quality, because it allows EPs, eligible hospitals, and CAHs to receive quantitative information upon which they can then act in order to improve quality.

Accordingly, although we did not propose under sections 1848(o)(2)(A)(iii) and 1886(n)(3)(A)(iii) of the Act to require that for 2011 EPs, eligible hospitals, and CAHs report clinical quality measures to us or States electronically, we proposed to require as an additional condition of demonstrating meaningful use of certified EHR technology under sections 1848(o)(2)(A)(i), 1886(n)(3)(A)(ii), and 1903(t)(6) of the Act that EPs and eligible hospitals use certified EHR technology to capture the data elements and calculate the results for certain clinical quality measures. Further, we proposed that EPs, eligible hospitals, and CAHs demonstrate that they have satisfied this requirement during the EHR reporting period for 2011 through attestation. We also proposed to require that Medicare EPs, eligible hospitals, and CAHs attest to the accuracy and completeness of the numerators and denominators for each of the applicable measures. Finally, in accordance with our authority under sections 1848(o)(C)(i)(V) and 1886(n)(3)(C)(i)(V) of the Act, which grants us broad discretion to specify the means through which EPs, eligible hospitals, and CAHs demonstrate compliance with the meaningful use criteria, we proposed that EPs, eligible hospitals, and CAHs demonstrate their use of certified EHR technology to capture the data elements and calculate the results for the applicable clinical quality measures by reporting the results to us for all applicable patients. For the Medicaid incentive program, we proposed that States may accept provider attestations in the same manner to demonstrate meaningful use in 2011. However, we indicated that we expect that most Medicaid providers will qualify for the incentive payment by adopting, implementing, or upgrading to certified EHR technology, and therefore will not need to attest to meaningful use of certified EHR technology in 2011, for their first payment year.

We stated that we recognize that considerable work needs to be done by measure owners and developers with respect to the clinical quality measures that we proposed. This includes completing electronic specifications for measures, implementing such specifications into EHR technology to capture and calculate the results, and implementing the systems, themselves. We also recognized that some measures are further developed than others, as discussed in the measures section (see 75 FR 1871) of the proposed rule. Nevertheless we stated our belief that overall there is sufficient time to complete work on measures and measures specifications so as to allow vendors and EPs, eligible hospitals, and CAHs to implement such systems. We stated that it was our intention not to finalize those specific measures should the necessary work on measure specifications not be completed for particular measures according to the timetable we discuss below. As we discuss below, we finalize in this final rule only those clinical quality measures for which clearly defined electronic specifications have been finalized by the date of display of this final rule. Finalized clinical quality measures are listed in Table 6 for EPs and Table 7 for eligible hospitals and CAHs. We also clarify that while States may not have the capacity to accept electronic reporting of clinical quality measures in 2011 or their first year implementing their Medicaid EHR incentive program, we expect that they will have such capacity by their second implementation year. However, if they do not, as with the Federal government, the State would continue to rely on an attestation methodology for reporting clinical quality measures as a requirement for demonstrating meaningful use of certified EHR technology, subject to CMS prior approval via an updated State Medicaid HIT plan.

Comment: A few commenters requested that the definition of "clinical quality measures" be expanded to include "appropriate clinical prevention."

Response: We agree that appropriate clinical prevention is a pertinent topic for clinical quality measures, but we do not believe the definition of clinical quality measures needs to delineate every aspect of quality care included in the definition.

Comment: Several commenters said it will be difficult to develop the EHR capability to capture, integrate and train staff regarding measure specifications if the clinical quality measures are not posted with sufficient time to allow these activities. Other commenters said there is insufficient time allowed for vendors to retool their products and complete development of the reports and/or systems. Several commenters indicated that the clinical quality measures have not been tested, and reliability and validity testing should be performed. Other commenters indicated that standard, clearly defined electronic specifications do not exist and new specifications should be pilot tested and published for stakeholder/public comment. A commenter requested that CMS establish an explicit process for development and testing of evidence based electronically specified measures (eMeasure), and ensure adequate time for field testing.

Response: In general we agree with the desirability of having electronic specifications available, pilot tested, and published for stakeholder viewing sufficiently in advance so as to allow adequate time for modifications if necessary and vendors to incorporate them into certified EHR technology, and for EPs, eligible hospitals, and CAHs to

integrate the measures into their operations and train staff on the measures. In this case, however, there is a process for certification of certified EHR technology which includes testing of the capability of the certified EHR. The final rule issued by ONC (found elsewhere in this issue of the **Federal Register**) provides that certified EHR technology must have the ability to calculate clinical quality measures as specified by us. We interpret this requirement to mean that certified EHR technology must have the capability to calculate those clinical quality measures selected in this final rule based on the specifications we select and post on the CMS Web site. In order to provide sufficient time for vendors to retool their products and complete development of the necessary reports and/or systems for calculation of the results for the required clinical quality measures, and for certifying bodies to test and certify that EHR technologies adequately do so, we are adopting only those electronic specifications that are posted on the CMS Web site as of the date of display of this final rule. We believe testing that is part of the process for certification of EHR technology will substitute for testing that might otherwise occur. Additionally, some of the selected measures have undergone various amounts of testing already. For example, the Emergency Department Throughput, Stroke and Venous Thromboembolism (VTE) measures mentioned by the commenter were tested during the January 2010 Connectathon and demonstrated at the Health Information and Management Systems Society (HIMSS) 2010 Interoperability Showcase which demonstrated the use of the measures by participating vendors. However, we expect the EHR certification process to carry out the necessary testing to assure that applicable certified EHR technology can calculate sufficient number of EP, eligible hospital and CAH clinical quality measures required to qualify for the meaningful use incentive program. In order to permit greater participation by EHR vendors, including specialty EHRs, the certification program (*see* ONC final rule found elsewhere in this issue of the **Federal Register**) will permit EHRs to be certified if they are able to calculate at a minimum three clinical quality measures in addition to the six core and alternative core measures. In addition, the fact that EPs, eligible hospitals, and CAHs can adopt an EHR reporting period toward the end of FY/CY 2011, we believe, will provide additional time for providers to implement and train staff on the measures we adopt in this final rule.

c. Statutory Requirements and Other Considerations for the Selection of Clinical Quality Measures for Electronic Submission by EPs, Eligible Hospitals, and CAHs

(1) Statutory Requirements for the Selection of Clinical Quality Measures for Electronic Submission by EPs, Eligible Hospitals, and CAHs

Sections 1848(o)(2)(B)(i)(II) and 1886(n)(3)(B)(i) of the Act require that prior to any clinical quality measure being selected, the Secretary will publish in the **Federal Register** such measure and provide for a period of public comment on such measure. The proposed clinical quality measures for EPs, eligible hospitals, and CAHs for 2011 and 2012 payment were listed in Tables 3 through 21 of the proposed rule (see 75 FR 1874 through 1900).

In the proposed rule, we noted that for purposes of selecting clinical quality measures on which EPs will be required to submit information using certified EHR technology, section 1848(o)(2)(B)(i)(I) of the Act, as added by section 4101 of the HITECH Act, states that the Secretary shall provide preference to clinical quality measures that have been endorsed by the entity with a contract with the Secretary under section 1890(a) of the Act, as added by section 183 of the Medicare Improvement for Patients and Providers Act (MIPPA) of 2008. For submission of clinical quality measures by eligible hospitals and CAHs, section 1886(n)(3)(B)(i)(I) of the Act, as added by section 4102(a) of the HITECH Act, requires the Secretary to provide preference to those clinical quality measures that have been endorsed by the entity with a contract with the Secretary under section 1890(a) of the Act, as added by section 183 of the MIPPA, or clinical quality measures that have been selected for the purpose of applying section 1886(b)(3)(B)(viii) of the Act (that is, measures that have been selected for the Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program).

On January 14, 2009, the U.S. Department of Health and Human Services awarded the contract required under section 1890(a) of the Act to the National Quality Forum (NQF). Therefore, we explained in the proposed rule that when selecting the clinical quality measures EPs must report in order to demonstrate meaningful use of certified EHR technology in accordance with section 1848(o)(2)(B)(i)(I) of the Act, we will give preference to the clinical quality measures endorsed by the NQF, including NQF endorsed measures that have previously been selected for the Physician Quality Reporting Initiative (PQRI) program. Similarly, we stated that when selecting the clinical quality measures eligible hospitals and CAHs must report in order to demonstrate meaningful use of certified EHR technology in accordance with section 1886(n)(3)(B)(i)(I) of the Act, we will give preference to the clinical quality measures selected from those endorsed by the NQF or that have previously been selected for the RHQDAPU program. In some instances we proposed measures for EPs, eligible hospitals, and CAHs that are not currently NQF endorsed in an effort to include a broader set of clinical quality measures. In the proposed rule, we noted that the HITECH Act does not require the use of NQF endorsed measures, nor limit the measures to those included in PQRI or RHQDAPU. We stated that if we, professional societies, or other stakeholders identify clinical quality measures which may be appropriate for the EHR incentive programs, we will consider those measures even if they are not endorsed by the NQF or have not been selected for the PQRI or RHQDAPU programs, subject to the requirement to publish in the **Federal Register** such measure(s) for a period of public comment.

We proposed certain clinical quality measures for EPs, eligible hospitals, and CAHs, and listed these measures in Tables 3 through 21 of the proposed rule (see 75 FR 1874–1900) for use in the 2011 and 2012 payment years. We stated that no changes (that is, additions of clinical quality measures) would be made after publication of the final rule, except through further rulemaking. However, we stated that we may make administrative and/or technical modifications or refinements, such as revisions to the clinical quality measures titles and code additions, corrections, or revisions to the detailed specifications for the 2011 and 2012 payment year measures. We stated that the 2011 specifications for user submission of clinical quality measures would be available on our Web site when they are sufficiently developed or finalized. Specifications for the EHR incentive programs must be obtained *only* from the specifications documents for the EHR incentive program clinical quality measures.

Comment: Numerous comments were received regarding the criteria for selection of clinical quality measures. Some commenters noted the importance of scientific and medical evidence supporting the measure, as well as

concerns regarding how the clinical quality measures are maintained. Many other commenters indicated that all clinical quality measures should be evidence-based and up-to-date with current medical standards. Several commenters communicated support for using NQF; Hospital Quality Alliance (HQA); Ambulatory care Quality Alliance (AQA); and the American Medical Association-Physician Consortium for Performance Improvement (AMA–PCPI) clinical quality measures. Another commenter suggested that measures that have a related U.S. Preventative Services Task Force (USPSTF) recommendation should follow the USPSTF guidelines and the regulations should allow for clinical quality measures to be updated as the evidence base changes. Another commenter indicated CMS should ensure that all clinical quality measures are endorsed through a stakeholder consensus process. Commenters also questioned why some clinical quality measures in the proposed rule do not have identifiers for example, NQF number and another commenter indicated some of the clinical quality measures titles were different in the clinical quality measure tables. Some commenters also stated that clinical quality measures should be phased in, implementing the clinical quality measures by clinically related sets, and that all CMS proposed clinical quality measures should be NQF endorsed.

Some commenters suggested that CMS should consult with other quality measure stakeholders, such as, NQF, the Hospital Quality Alliance (HQA), and the National Committee for Quality Assurance (NCQA), The Joint Commission (TJC), and Regional Health Improvement Collaboratives to verify the validity, reliability, and appropriateness of proposed clinical measures. In addition when developing, validating and recommending clinical quality measures for the pediatric population, a commenter suggested CMS include consultation with the Child Healthcare Corporation of America (CHCA) or the National Association of Children's Hospitals (NACHRI).

Response: The HITECH Act requires that we give preference to clinical quality measures that are NQF endorsed. NQF is the only organization that we are aware of which is in compliance with the requirements of National Technology Transfer and Advancement Act (NTTAA), to endorse quality measures through voluntary consensus standards. However, the HITECH Act does not require the exclusive use of NQF endorsed measures, nor limit the measures to those produced by any particular developer or adopted or supported by any particular organization, such as those suggested by the commenters. We gave preference to NQF endorsed clinical quality measures in this final rule. However, we do not adopt a policy that would restrict the Secretary's discretion of beyond what is required by the statute. Measures listed in the proposed rule that did not have an NQF identifying number were not NQF endorsed.

With respect to specific organizations, we have received broad input regarding clinical quality measures including from many organizations mentioned by commenters and have considered their comments in determining which clinical quality measures to finalize in this final rule. We also note that, for NQF endorsed measures, the NQF provides a venue for public and member input as a part of the endorsement process. With respect to commenters urging consideration of whether the scientific and medical evidence support the measure, whether the clinical quality measures are evidence-based and consistent with current medical standards, and how the clinical quality measures are maintained, we note that these factors are part of the NQF process, as well as standard measure development processes. We are committed to working with national, State and local associations to identify or develop additional electronically specified clinical quality measures, particularly for pediatric populations, for later stages of meaningful use.

In selecting clinical quality measures for the Medicare EHR incentive program, the Secretary is required to provide for notice in the **Federal Register** with public comment. This provides broad public input which we fully consider. However, as we stated in the proposed rule, we are finalizing the policy that technical specifications for clinical quality measures are developed and finalized through the sub-regulatory process. Further, this requirement does not pertain to the Medicaid EHR incentive program. We expect to develop a process in the future to solicit public input on Medicaid-specific clinical quality measures for future stages of meaningful use, if needed. However, because there are no such Medicaid-specific measures in this final rule, and all measures apply uniformly across both the Medicare and Medicaid EHR incentive program, we have not developed such a process in this final rule.

After consideration of the public comments received, the HITECH Act requires that we give preference to clinical quality measures that are NQF endorsed. However, it does not require the exclusive use of NQF endorsed measures, nor limit the measures to those produced by any particular developer nor be adopted by any particular organization. In this case, all clinical quality measures we are finalizing are NQF endorsed and have current electronic specifications as of the date of display of this final rule. Effective with the publication of this final rule, these specifications are final for clinical quality measure reporting under the HITECH Act beginning with 2011 and 2012. The detailed electronic specifications of the clinical quality measures for EPs, eligible hospitals, and CAHs are displayed on the CMS Web site at *http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage.*

Sections 1848(o)(2)(B)(iii) and 1886(n)(3)(B)(iii) of the Act requires that in selecting clinical quality measures, the Secretary shall seek to avoid redundant or duplicative reporting otherwise required, including reporting under section 1848(k)(2)(C) of the Act (the PQRI program) and eligible reporting under section 1886(b)(3)(B)(viii) of the Act (RHQDAPU program). For EPs, when the proposed rule was issued there was no statutory authority to provide PQRI incentive payments for services furnished for 2011 or subsequent years. Since then, the PQRI incentive payment for 2011 has been authorized. We acknowledge there is overlap within the clinical quality measure reporting for EPs in the EHR incentive program with the PQRI incentive program. However, the reporting periods in these two incentive programs are different. Currently, the PQRI has a six and a twelve month reporting period. The reporting period for the HITECH EHR incentive program for the first payment year is 90 days, which does not meet the PQRI reporting requirement of six or twelve month reporting period, as currently provided. However, in the second payment year of the HITECH EHR incentive program the reporting period is one year, and the PQRI reporting period, would be synchronous. The requirement for qualification for PQRI is subject to a separate regulation. Although there may be additional issues beyond the reporting periods, we anticipate efforts to avoid redundant and duplicative reporting in PQRI of the same clinical quality measures as required in the EHR incentive program. We envision a single reporting infrastructure for electronic

submission in the future, and will strive to align the EHR incentive program and PQRI as we develop the reporting framework for clinical quality measures to avoid redundant or duplicative reporting. Further, we also note that the Affordable Care Act (Pub. L. 111–148) requires that the Secretary develop a plan to integrate the EHR incentive program and PQRI by January 1, 2012. In doing so we expect to further address the issue of redundant and duplicative reporting. For eligible hospitals and CAHs, for the EHR incentive program, we are finalizing one set of 15 clinical quality measures for both Medicare and Medicaid. For Stage 1 (for clinical quality measures Stage 1 is 2011 and beginning in 2012), none of the finalized 15 clinical quality measures for eligible hospitals and CAHs are currently included in the RHQDAPU program, and therefore there is no issue of redundant and duplicative reporting based upon the HITECH Act. Nevertheless, clinical quality measures in the EHR incentive program for eligible hospitals and CAHs were electronically specified for use in the RHQDAPU program with the anticipation to place these measures in RHQDAPU once we have completed and implemented the mechanism to accept quality measures through electronic submission. For the future, we do not anticipate having one set of clinical quality measures for the EHR incentive program and another set for RHQDAPU. Rather, we anticipate a single set of hospital clinical quality measures, most of which we anticipate can be electronically specified. We note some of the RHQDAPU quality measures, for example HCAHPS experience of care measures, do not lend themselves to EHR reporting. Similarly, certain outcome quality measures, such as the current RQHDAPU readmission measures, are based on claims rather than clinical data. In the future, we anticipate hospitals that report RHQDAPU measures electronically would receive incentives from both the RHQDAPU and EHR incentive program, in addition to properly reporting any required quality measures that are not able to be derived from EHRs; this is however subject to future rulemaking. Further, in the future, for hospitals that do not report electronically we anticipate that they may only qualify for an incentive through the RHQDAPU program, and not through the EHR incentive program. Again this is subject to future rulemaking. We envision a single reporting infrastructure for electronic submission in the future, and will strive to align the hospital quality initiative programs to seek to avoid redundant and duplicative reporting of quality measures for eligible hospitals and CAHs.

Comment: Many commenters also suggested aligning clinical quality measure reporting across federal agencies (for example, HRSA, CMS) as well as across programs, (for example, PQRI, CHIP, Medicare and Medicaid) to avoid duplicative and redundant quality performance reporting. Additionally, several commenters suggested that similar clinical quality measures and/or quality data efforts included in the proposed rule are included in other clinical quality recognition programs and EPs who successfully report in these programs via a certified EHR should be deemed to have successfully reported in the EHR incentive program. Other commenters suggested using the PQRI reporting process to satisfy the meaningful use requirement under the EHR incentive program for EPs. Another commenter indicated that clinical quality measures employed by this program and others will be valuable if EPs using EHRs have an in-depth understanding of how to leverage the technology and the data they produce to improve care. A number of commenters requested that only clinical quality measures chosen for use in the RHQDAPU program should be considered for implementation in the EHR incentive program for eligible hospitals and CAHs that qualify for both incentives. Additionally, the commenters stated they would like the process for avoiding duplicative reporting clearly defined.

Response: The HITECH Act requires that the Secretary seek to avoid redundant and duplicative reporting, with specific reference to PQRI for EPs and RHQDAPU for eligible hospitals and CAHs. We have sought to avoid duplicative and redundant reporting in the implementation of the HITECH Act as discussed elsewhere in our responses to comments in this final rule. We will seek to align quality initiative programs in future rulemaking.

(2) Other Considerations for the Selection of Clinical Quality Measures for Electronic Submission by EPs, Eligible Hospitals, and CAHs

In addition to the requirements under sections 1848(o)(2)(B)(i)(I) and 1886(n)(3)(B)(i)(I) of the Act and the other statutory requirements described above, we also proposed applying the following considerations to the selection of the clinical quality measures for electronic submission under the Medicare and Medicaid EHR incentive programs:

- Clinical quality measures that are included in, facilitate alignment with, or allow determination of satisfactory reporting in other Medicare (for example, PQRI or the RHQDAPU program), Medicaid, and Children's Health Insurance Program (CHIP) program priorities.
- Clinical quality measures that are widely applicable to EPs and eligible hospitals based on the services provided for the population of patients seen.
- Clinical quality measures that promote CMS and HHS policy priorities related to improved quality and efficiency of care for the Medicare and Medicaid populations that would allow us to track improvement in care over time. These current and long term priority topics include: prevention; management of chronic conditions; high cost and high volume conditions; elimination of health disparities; healthcare-associated infections and other conditions; improved care coordination; improved efficiency; improved patient and family experience of care; improved end-of-life/palliative care; effective management of acute and chronic episodes of care; reduced unwarranted geographic variation in quality and efficiency; and adoption and use of interoperable HIT.
- Clinical quality measures that address or relate to known gaps in the quality of care and measures that through the PQRI program, performed at low or highly variable rates.
- Clinical quality measures that have been recommended for inclusion in the EHR incentive by the HIT Policy Committee.

We noted in the proposed rule that the Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009 (Pub. L. 111–3) Title IV, section 401 requires the Secretary to publish a core set of clinical quality measures for the pediatric population. We stated that, to the extent possible, we would align the clinical quality measures selected under the EHR incentive program with the measures selected under the CHIPRA core measure set. Included in the proposed clinical quality measures were nine clinical quality measures pertaining to pediatric providers. Four of these nine measures were on the list of CHIPRA initial core measures that were recommended to the Secretary by the Subcommittee to AHRQ's National Advisory Committee (SNAC). In our proposed rule, we noted that not all CHIPRA initial measures recommended to the Secretary were applicable to EHR technology or to the EHR incentive payment program. For example, some of

the measures are population-based, survey-derived, or not yet NQF endorsed. We stated that new or additional measures for the next iteration of the CHIPRA core set would have EHR extractability as a priority.

Since the publication of the proposed rule, the CHIPRA core measure set has been published in a final rule (see 74 FR 68846 through 68849). In this EHR incentive program final rule, there are four clinical quality measures that are also in the published CHIPRA initial core measure set. These clinical quality measures are shown below in Table 4:

Table 4: Clinical Quality Measures in the EHR Incentive Program Final Rule that are also in the CHIPRA Initial Core Measure Set

Measure Number	Clinical Quality Measure Title
NQF 0024	Weight Assessment Counseling for Children and Adolescents
NQF 0033	Chlamydia Screening for Women
NQF 0038	Childhood Immunization Status
NQF 0002 PQRI 66	Appropriate Testing for Children with Pharyngitis

Due to the concurrent CHIPRA and ARRA HIT implementation activities, we believe there is an exciting opportunity to align the two programs and strive to create efficiencies for States and pediatric providers, where applicable. Similarly, the adult quality measures requirements enacted in the ACA will provide another opportunity for CMS to align its quality measures programs for consistency and to maximize use of electronic reporting. As these programs move forward, we will continue to prioritize consistency in clinical quality measure selection for providers when possible.

We solicited comments on the inclusion or exclusion of any clinical quality measure or measures proposed for the 2011 and 2012 payment years, and to our approach in selecting clinical quality measures.

We stated in the proposed rule that we do not intend to use notice and comment rulemaking as a means to update or modify clinical quality measure specifications. A clinical quality measure that has completed the consensus process through NQF has a designated party (usually, the measure developer/owner) who has accepted responsibility for maintenance of the clinical quality measure. In general, it is the role of the clinical quality measure owner, developer, or maintainer/steward to make basic changes to a clinical quality measure in terms of the numerator, denominator, and exclusions. We proposed that the clinical quality measures selected for the 2011 and 2012 payment year be supplemented by our technical specifications for EHR submission. We proposed to post the complete clinical quality measures specifications including technical specifications to our Web site and solicited comments on our approach.

We received various comments as to our proposed considerations for selection of clinical quality measures for submission by EPs, eligible hospitals, and CAHs.

Comment: One commenter said that there needs to be longer than nine months for the look back for capturing clinical quality measures data. Several commenters indicated that baseline measurements that have used the clinical quality measure in the past have not been performed. Commenters also recommended the linkage of clinical decision support to clinical quality measures to strengthen quality improvement efforts. A commenter supported our inclusion of measures that address both quality and resource use efficiency. Another commenter indicated support for the clinical quality measures as represented in the proposed rule.

Response: The look back for capturing clinical quality measures is the period of time for which data would be considered as applying to the measure calculation. The look back period for a clinical quality measure and the method of documentation of prior information is defined by the clinical quality measure specification. The clinical quality measures require reporting and not achievement on particular performance thresholds. We agree with the commenters regarding the benefits of linking clinical decision support tools to the clinical quality measures, and anticipate that as EHR technology evolves, many of the clinical quality measures will be supported by clinical decision support tools. We also agree with the benefits of efficiency measures and we expect that in future program years the scope and variety of measures that address these factors will expand.

Comment: Commenters requested a definition for "Eligible Provider and Non-Qualifying Eligible Provider" with respect to the provider's ability to meet meaningful use if there are no appropriate clinical quality measures to report, the application of financial penalties beginning in 2015, and the handling of exclusions. Another commenter stressed the need for detailed information regarding what is included and excluded in the numerator and denominator for each measure so as to ensure that certified EHR technology's programmed analytics capture all patients who meet the relevant criteria and to ensure that clinical quality measures are properly evaluated. Others indicated that reporting measures electronically will reduce administrative reporting costs. Other commenters supported the ability to report "N/A" for clinical quality measures where an insufficient denominator exists. Other commenters urged that CMS not include any clinical quality measures in Stage 1 of Meaningful Use because they believe Stage 1 should focus on the initial implementation of certified EHR systems and its use for patient care, and that EPs must gain experience with their certified EHR technology before attesting to the accuracy and completeness of numerators, denominators and quality calculations generated from these systems.

Response: While some commenters recommended we not include any clinical quality measures in Stage 1 (2011 and beginning in 2012), as previously described for Stage 1 EPs are required to attest to the clinical quality measures calculated results (numerator,

denominator, and exclusions) as automatically calculated by the certified EHR technology. Given that the statutory requirement for clinical quality measures is an element of meaningful use, we believe that providing this information on clinical quality measures is appropriate for Stage 1 (2011 and beginning in 2012). We would expect that the patient for whom a clinical quality measure does not apply will not be included in the denominator of the clinical quality measure. If not appropriate for a particular EP we would expect that either patients would not appear in the denominator of the measure (a zero value) or an exclusion would apply. Therefore reporting "N/A" is not necessary. Exclusion parameters—that is, information on what is included and excluded in the numerator and denominator for a clinical quality measure–are included in the measure specifications. We agree that reporting measures electronically will reduce administrative reporting costs, however as discussed in this final rule we will not require electronic submission of clinical quality measures until 2012. Also discussed earlier in this final rule, we believe collecting clinical quality measure data is an important part of meaningful use.

Comment: A commenter indicated that CMS should take ownership of each of the EP clinical quality measures so that CMS can then adjudicate issues related to the clinical quality measures, instead of referring the EP to the measure owner. One commenter believes that EPs and their specialty societies should be the only owners of EP clinical quality measures.

Response: We are the owner/developer for certain clinical quality measures. More commonly, we use the clinical quality measures developed and owned by others, who are then responsible for the clinical quality measure specifications as endorsed by NQF. Numerous measures have been developed over the years by various organizations and CMS, and therefore we do not believe that specialty societies should be the only owners of EP clinical quality measures. The HITECH Act does not suggest or require that we should be the sole owner/developer of clinical quality measures.

Comment: A commenter questioned whether clinical quality measures would be updated during the bi-annual review process and how much lead time will be given.

Response: The measures for Stage 1 (2011 and beginning in 2012) of meaningful use are finalized in this final rule and will not change during that stage. Additionally, the electronic specifications, as posted on the CMS Web site at the time of publication of this final rule, are final. We intend to expand the clinical quality measures again for Stage 2 of meaningful use, which we anticipate will first be effective for the 2013 payment year. As required by the HITECH Act for the Medicare EHR incentive program, prior to selecting any new clinical quality measure(s) for Stage 2 of meaningful use, we will publish notice of the proposed measure(s) and request and consider public comments on the proposed measures. We note that the Medicaid EHR incentive program does not have the same statutory requirement. If future stages of meaningful use include clinical quality measures specific for Medicaid providers, we will consider a process to receive public input on such measures.

Comment: One commenter suggested that only measures chosen for use in the pay-for-reporting program should be considered for implementation in the EHR incentive program.

Response: We selected clinical quality measures that are broadly applicable for the 2011 and 2012 EHR incentive program. Many clinical quality measures used in other Medicare pay-for-reporting programs are not applicable to all Medicaid eligible providers, such as pediatricians, certified nurse-midwives, and children's hospitals.

Comment: Commenters suggested alignment between measures with vocabulary standards, in order to promote interoperability of clinical data. Stage 1 allows alternative vocabularies for problems, drugs, and procedures; and measures should only be included if alternative specifications using all Stage 1 vocabularies are provided. Commenters recommended incorporating HL7, LOINC, SNOMED, ICD–9, and ICD–10 for data exchange.

Response: Standards for certified EHRs, including vocabulary standards, are included in ONC's final rule (found elsewhere in this issue of the **Federal Register**).

Comment: Commenter recommended that in the beginning stages of implementation of the EHR incentive programs, CMS should base its reporting initiatives on existing industry models to prevent delays, consumer mistrust, and potential legal issues.

Response: We have conducted extensive reviews of industry standards, employed the comments of industry experts and solicited public comments on all proposed processes.

Comment: Many commenters are concerned that there will not be adequate time to communicate and implement the electronic specification for 2011 clinical quality measure requirements. Additionally, one commenter expressed concern that the additional clinical quality measures required for 2011 reporting will not be posted by CMS in time for careful review and assessment, since currently there are only 15 measures electronically specified and posted. Commenters requested clinical quality measures to be posted with implementation guides for each quality reporting metric to ensure successful reporting.

Response: We have limited the requirements for clinical quality measure reporting for eligible hospitals and CAHs to the 15 measures that were electronically specified and posted at the time of publishing the proposed rule. All measures specifications for clinical quality measures selected are final effective upon publication of the EHR incentive program final rule.

d. Clinical Quality Measures for EPs

For the 2011 and 2012 EHR reporting periods, based upon the considerations for selecting clinical quality measures discussed above, we proposed certain clinical quality measures that were identified in the proposed rule (see 75 FR 1874–1889) for EPs. Tables 4 though 19 of the proposed rule divided the clinical quality measures identified in Table 3 into core measures and specialty group measures (see 75 FR 1890 through 1895). The concept of core measures and specialty group measures is discussed below.

We also stated that some measures were in a higher state of readiness than others, and requested comment on each measure's state of readiness for use in the EHR incentive programs. For those measures where electronic specifications did not, at the time of the proposed rule, exist, we solicited comment on how quickly electronic specifications could be developed, and the period of time required from final posting of the electronic specifications for final measures to ensure the effective implementation of the measures. We stated our intention to publish electronic specifications for the proposed clinical quality measures on the CMS Web site as soon as they become available from the measure developer(s). Electronic specifications may be developed concurrently with the development of measures themselves and potentially with the NQF endorsement processes. We stated that all of the proposed clinical quality measures included in Table 3 (see 75 FR 1874–1889) meet one or more of the

criteria for the selection of clinical quality measures, discussed in the proposed rule. A large portion of these measures had been through notice and comment rulemaking for PQRI, and nearly all PQRI clinical quality measures are NQF endorsed. Additionally, they have broad applicability to the range of Medicare designated specialties, and the services provided by EPs who render services to Medicare and Medicaid beneficiaries and many others. Further, nine of the proposed 90 clinical quality measures listed in Table 3 (*see* 75 FR 1874–1889) (PQRI numbers 1, 2, 3, 5, 7, 110, 111, 112, and 113) had preliminary specifications for electronic submission that had already been developed for the purpose of testing the submission of clinical quality data extracted from an EHR for the PQRI program. The link to the preliminary electronic specifications for nine PQRI clinical quality measures was provided: *http://www.cms.hhs.gov/pqri.*

We stated that in terms of CMS and HHS healthcare quality priorities, clinical quality PQRI measures numbered 1, 2, 3, 5, and 7 address high priority chronic conditions, namely diabetes, coronary artery disease, and heart disease. Clinical quality PQRI measures numbered 110, 111, 112, 113, 114, 115, and 128 support prevention which is a high CMS and HHS priority. The PQRI clinical quality measure specifications for claims-based or registry-based submission of these clinical quality measures for the most current PQRI program year can be found on the PQRI section of the CMS Web site at *http://www.cms.hhs.gov/PQRI/15_MeasuresCodes.asp#TopOfPage.* A description of the clinical quality measure, including the clinical quality measure's numerator and denominator, can be found in the PQRI clinical quality measure specifications.

We pointed out that the PQRI clinical quality measures that were proposed largely align with the recommendations of the HIT Standards Committee. However, in addition to proposed clinical quality measures that are currently included in PQRI, we also proposed certain other clinical quality measures that we stated are of high importance to the overall population. Those clinical quality measures are Ischemic Vascular Disease (IVD): Use of Aspirin or another Antithrombotic; IVD: Complete Lipid Profile; IVD: Low Density Lipoprotein (LDL–C) Control, and Blood Pressure Management. Finally, we proposed an array of other measures which address important aspects of clinical quality.

We stated our belief that the proposed clinical quality measures were broad enough to allow for reporting for EPs and addressed high priority conditions. We recognized the importance of integrating the measures into certified EHR technologies for calculation of measures results, and that not all measures would be feasible for 2011 and 2012. We invited comment on the advisability of including the measures for payment years 2011 and 2012. Although we recognized that there are many other important clinical quality measures of health care provided by EPs, we anticipated expanding the set of clinical quality measures in future years and listed a number of clinical quality measures for future consideration in section II.A.3.g of the proposed rule preamble, on which we also invited comment.

Comment: Many of the proposed clinical quality measures received favorable comments and support for inclusion in the final clinical quality measure set. A few examples of measures that were supported for inclusion were measures related to prevention and screening, and diabetes. It was stated by a commenter that the proposed rule includes some similar clinical quality measures. For example, the commenter indicated NQF 0059 and NQF 0575 both deal with hemoglobin A1c control. Others commented that some measures should be eliminated and not utilized in the final set of clinical quality measures for EPs. For example, a few commented that the following two measures should be eliminated, NQF 0052 and NQF 0513 were intended to be implemented at the administrator site level using outpatient hospital claims and not at the individual practitioner level. A number of commenters stated that the specifications for certain clinical quality measures, for example, NQF 0022, NQF 0031, NQF 0032, NQF 0033, NQF 0034, and NQF 0061 were not consistent with current clinical practice guidelines. Another commenter requested clarification for the specifications for NQF 0013 because blood pressures are not routinely monitored for 2-month-old patients. Many commenters provided suggestions for other clinical quality measures not included in the proposed rule.

Response: We appreciate all of the suggestions from the commenters. We are unable to add any clinical quality measures that were not identified in the proposed rule due to language in sections 1848(o)(2)(B)(i)(II) and 1886(n)(3)(B)(i) of the Act requiring a period of public comment for any finalized measures. This requirement does not pertain to the Medicaid EHR incentive program; we expect to develop a process in the future to solicit public input on Medicaid-specific clinical quality measures for future stages of meaningful use, if needed. However, we will consider those additional clinical quality measures recommended by commenters for future inclusion in the clinical quality measure sets.

In regard to suggested changes/revisions and/or elimination of the proposed clinical quality measures, we considered these suggestions when finalizing clinical quality measures in this final rule. In regard to this, we considered these suggestions when evaluating the clinical quality measures for selection in this final rule. Of the clinical quality measures in the proposed rule that we are not finalizing, we removed the measures that do not have electronic specifications by the date of display of this final rule. Additionally, some of the proposed clinical quality measures were recommended for deletion or modification, and therefore were recommended to not be used in the final rule; this is delineated in other comments and responses in this final rule. Further, we are only finalizing clinical quality measures that are electronically specified the date of display of the final rule. The electronic specifications included in the final set of clinical quality measures for EPs are posted to the CMS Web site at: *http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage.*

Comment: Numerous commenters were concerned about the burden (economic and other) of reporting on the large number of clinical quality measures and the overall quality reporting burden this will add to EPs. Some commenters stated that the use of numerators and denominators for some measures will require manual calculation on the part of the EPs since there are no automated reports that can capture all of the information that must be tabulated. One commenter stated that there are insufficient resources to calculate the denominators of the required measures. Other commenters suggested using the PQRI requirements of reporting only three measures, and others suggested reporting on significantly smaller number of measures.

Response: In response to the many comments received regarding the undue burden associated with reporting on a large number of clinical quality measures, or measures that involve a manual process, we have finalized only those clinical quality measures that can

be automatically calculated by a certified EHR technology. We further limited the measures to those for which electronic specifications are currently available, which we posted as final by the date of display of this final rule. This limitation significantly reduces the number of measures EPs are required to report in 2011 and 2012, thus reducing the EPs' reporting burden as well as addressing commenters' concerns about readiness. Although for 2011, Medicare EPs, eligible hospitals, and CAHs will still need to manually report (attest) to the results automatically calculated by their certified EHR technology, we believe that with the reduction in the number of measures that the burden is reasonable. Additionally, this provides for the reporting of clinical quality measures beyond simply the core clinical quality measures that EPs identify as suitable to report.

Table 5, below, shows the proposed clinical quality measures for submission by Medicare and Medicaid EPs for the 2011 and 2012 payment year as stated in the proposed rule (see 75 FR 1874–1889) for EPs, but that are not being finalized. Table 5 conveys the NQF measure number and PQRI implementation number (that is, the number used in the PQRI program to identify the measure as implemented in PQRI (for the 2010 PQRI measures list see *https://www.cms.gov/PQRI/Downloads/2010_PQRI_MeasuresList_111309.pdf*)), clinical quality measure title and description, and clinical quality measure steward and contact information. The measures listed below in Table 5 do not have electronic specifications finished before the date of display of this final rule, thus we have eliminated these measures for this final rule and will consider the addition of these measures in future rulemaking. Also several measures listed below were only concepts at the time of publication of the proposed rule (that is, Hysterectomy rates, Appropriate antibiotic use for ear infections, Statin after Myocardial Infarction, 30 day Readmission Rate, 30 Readmission Rate following deliveries, and Use of CT Scans). These concept measures were not developed or electronically specified clinical quality measures, nor NQF endorsed; and there was not adequate time to consider these concepts for development for this final rule. Therefore, the concepts listed below will be considered in future rulemaking. Lastly, NQF 0026 has since been retired since publication of the proposed rule.

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TABLE 5: Proposed Clinical Quality Measures for Submission by Medicare or Medicaid EPs for the 2011 and 2012 Payment Year; Included in the Proposed Rule (see 75 FR 1874 through 1889) and Not in the Final Rule

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0246 PQRI 10	**Title:** Stroke and Stroke Rehabilitation: Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) Reports **Description:** Percentage of final reports for CT or MRI studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or transient ischemic attack (TIA) or intracranial hemorrhage or at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage that includes documentation of the presence or absence or each of the following: hemorrhage and mass lesion and acute infarction.	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0270 PQRI 20	**Title:** Perioperative Care: Timing of Antibiotic Prophylaxis – Ordering Physician **Description:** Percentage of surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics, who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours), prior to the surgical incision (or start of procedure when no incision is required)	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0268 PQRI 21	**Title:** Perioperative Care: Selection of Prophylactic Antibiotic – First OR Second Generation Cephalosporin **Description:** Percentage of surgical patients aged 18 years and older undergoing procedures with the indications for a first OR second generation cephalosporin prophylactic antibiotic, who had an order for cefazolin OR cefuroxime for antimicrobial prophylaxis	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0271 PQRI 22	**Title:** Perioperative Care: Discontinuation of Prophylactic Antibiotics (Non-Cardiac Procedures) **Description**: Percentage of non-cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic, who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0239 PQRI 23	**Title:** Perioperative Care: Venous Thromboembolism (VTE) Prophylaxis (When Indicated in ALL Patients) **Description:**Percentage of patients aged 18 years and older undergoing procedures for which VTE prophylaxis is indicated in all patients, who had an order for Low Molecular Weight Heparin (LMWH), Low-Dose Unfractionated Heparin (LDUH), adjusted-dose warfarin, fondaparinux or mechanical prophylaxis to be given within 24 hours prior to incision time or within 24 hours after surgery end time	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0241 PQRI 33	**Title:** Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation at Discharge **Description:** Percentage of patients aged 18 years and older with a diagnosis of ischemic stroke or transient ischemic attack (TIA) with documented permanent, persistent, or paroxysmal atrial fibrillation who were prescribed an anticoagulant at discharge	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0102 PQRI 52	**Title:** Chronic Obstructive Pulmonary Disease (COPD): Bronchodilator Therapy **Description:** Percentage of patients aged 18 years and older with a diagnosis of COPD and who have an FEV1/FVC less than 70% and have symptoms who were prescribed an inhaled bronchodilator	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0069 PQRI 65	**Title:** Treatment for Children with Upper Respiratory Infection (URI): Avoidance of Inappropriate Use **Description:** Percentage of children aged 3 months through 18 years with a diagnosis of URI who were not prescribed or dispensed an antibiotic prescription on or within 3 days of the initial date of service	**NCQA** **Contact Information:** www.ncqa.org
NQF 0323 PQRI 81	**Title:** End Stage Renal Disease (ESRD): Plan of Care for Inadequate Hemodialysis in ESRD Patients **Description:** Percentage of calendar months during the 12-month reporting period in which patients aged 18 years and older with a diagnosis of ESRD receiving hemodialysis have a $Kt/V \geq 1.2$ OR patients who have a $Kt/V < 1.2$ with a documented plan of care for inadequate hemodialysis	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0321 PQRI 82	**Title:** End Stage Renal Disease (ESRD): Plan of Care for Inadequate Peritoneal Dialysis **Description:** Percentage of patients aged 18 years and older with a diagnosis of ESRD receiving peritoneal dialysis who have a Kt/V ≥ 1.7 OR patients who have a Kt/V < 1.7 with a documented plan of care for inadequate peritoneal dialysis at least three times (every 4 months) during the 12-month reporting period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0397 PQRI 86	**Title:** Hepatitis C: Antiviral Treatment Prescribed **Description**: Percentage of patients aged 18 years and older with a diagnosis of chronic hepatitis C who were prescribed peginterferon and ribavirin therapy within the 12-month reporting period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0401 PQRI 89	**Title:** Hepatitis C: Counseling Regarding Risk of Alcohol Consumption **Description:** Percentage of patients aged 18 years and older with a diagnosis of hepatitis C who were counseled about the risks of alcohol use at least once within the 12-month reporting period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0103 PQRI 106	**Title:** Major Depressive Disorder (MDD): Diagnostic Evaluation **Description:** Percentage of patients aged 18 years and older with a new diagnosis or recurrent episode of MDD who met the DSM-IV criteria during the visit in which the new diagnosis or recurrent episode was identified during the measurement period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0104 PQRI 107	**Title:** Major Depressive Disorder (MDD): Suicide Risk Assessment **Description:** Percentage of patients aged 18 years and older with a new diagnosis or recurrent episode of MDD who had a suicide risk assessment completed at each visit during the measurement period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0066 PQRI 118	**Title:** Coronary Artery Disease (CAD): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Patients with CAD and Diabetes and/or Left Ventricular Systolic Dysfunction (LVSD) **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD who also have diabetes mellitus and/or LVSD (LVEF < 40%) who were prescribed ACE inhibitor or ARB therapy	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
PQRI 121 Ambulatory Quality Alliance (AQA) adopted	**Title:** Chronic Kidney Disease (CKD): Laboratory Testing (Calcium, Phosphorus, Intact Parathyroid Hormone (iPTH) and Lipid Profile) **Description:** Percentage of patients aged 18 years and older with a diagnosis of advanced CKD (stage 4 or 5, not receiving Renal Replacement Therapy [RRT]), who had the following laboratory testing ordered within 12 months: serum levels of calcium, phosphorus and intact PTH, and lipid profile	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
PQRI 122 AQA adopted	**Title:** Chronic Kidney Disease (CKD): Blood Pressure Management **Description:** Percentage of patient visits for patients aged 18 years and older with a diagnosis of advanced CKD (stage 4 or 5, not receiving Renal Replacement Therapy [RRT]), with a blood pressure < 130/80 mmHg OR blood pressure ≥ 130/80 mmHg with a documented plan of care	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
PQRI 123 AQA adopted	**Title:** Chronic Kidney Disease (CKD): Plan of Care – Elevated Hemoglobin for Patients Receiving Erythropoiesis-Stimulating Agents (ESA) **Description:** Percentage of calendar months during the 12-month reporting period in which patients aged 18 years and older with a diagnosis of advanced CKD (stage 4 or 5, not receiving Renal Replacement Therapy [RRT]), receiving ESA therapy, have a hemoglobin < 13 g/dL OR patients whose hemoglobin is ≥ 13 g/dL and have a documented plan of care	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0416 PQRI 127	**Title:** Diabetes Mellitus: Diabetic Foot and Ankle Care, Ulcer Prevention – Evaluation of Footwear **Description:** Percentage of patients aged 18 years and older with a diagnosis of diabetes mellitus who were evaluated for proper footwear and sizing	**American Podiatric Medical Association (APMA)** **Contact Information:** http://www.apma.org/
NQF 0510 PQRI 145	**Title:** Radiology: Exposure Time Reported for Procedures Using Fluoroscopy **Description:** Percentage of final reports for procedures using fluoroscopy that include documentation of radiation exposure or exposure time	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0508 PQRI 146	**Title:** Radiology: Inappropriate Use of "Probably Benign" Assessment Category in Mammography Screening **Description:** Percentage of final reports for screening mammograms that are classified as "probably benign"	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0511 PQRI 147	**Title:** Nuclear Medicine: Correlation with Existing Imaging Studies for All Patients Undergoing Bone Scintigraphy **Description:** Percentage of final reports for all patients, regardless of age, undergoing bone scintigraphy that include physician documentation of correlation with existing relevant imaging studies (for example,, x-ray, MRI, CT, etc.) that were performed	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
PQRI 153 AQA adopted	**Title:** Chronic Kidney Disease (CKD): Referral for Arteriovenous (AV) Fistula **Description:** Percentage of patients aged 18 years and older with the diagnosis of advanced CKD (stage 4 or 5, not receiving Renal Replacement Therapy [RRT]), who were referred for AV fistula at least once during the 12-month reporting period	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0399 PQRI 183	**Title**: Hepatitis C: Hepatitis A Vaccination in Patients with HCV **Description:** Percentage of patients aged 18 years and older with a diagnosis of hepatitis C who received at least one injection of hepatitis A vaccine, or who have documented immunity to hepatitis A	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
NQF 0400 PQRI 184	**Title:** Hepatitis C: Hepatitis B Vaccination in Patients with HCV **Description:** Percentage of patients aged 18 years and older with a diagnosis of hepatitis C who received at least one injection of hepatitis B vaccine, or who have documented immunity to hepatitis B	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org
PQRI 185 AQA adopted	**Title:** Endoscopy & Polyp Surveillance: Colonoscopy Interval for Patients with a History of Adenomatous Polyps – Avoidance of Inappropriate Use **Description:** Percentage of patients aged 18 years and older receiving a surveillance colonoscopy and a history of colonic polyp(s) in a previous colonoscopy, who had a follow-up interval of 3 or more years since their last colonoscopy documented in the colonoscopy report	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org
NQF 0507 PQRI 195	**Title:** Stenosis Measurement in Carotid Imaging Reports **Description:** Percentage of final reports for carotid imaging studies (neck MR angiography [MRA], neck CT angiography [CTA], neck duplex ultrasound, carotid angiogram) performed for patients aged 18 years and older with the diagnosis of ischemic stroke or transient ischemic attack (TIA) that include direct or indirect reference to measurements of distal internal carotid diameter as the denominator for stenosis measurement	**AMA-PCPI/NCQA** **Contact Information**: cpe@ama-assn.org www.ncqa.org

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0022	**Title:** Drugs to be avoided in the elderly: a. Patients who receive at least one drug to be avoided, b. Patients who receive at least two different drugs to be avoided. **Description:** Percentage of patients ages 65 years and older who received at least one drug to be avoided in the elderly in the measurement year. Percentage of patients 65 years of age and older who received at least two different drugs to be avoided in the elderly in the measurement year.	**NCQA** **Contact Information:** www.ncqa.org
NQF 0026	**Title:** Measure pair - a. Tobacco use prevention for infants, children and adolescents, b. Tobacco use cessation for infants, children and adolescents **Description:** Percentage of patients' charts showing either that there is no tobacco use/exposure or (if a user) that the current use was documented at the most recent clinic visit. Percentage of patients with documented tobacco use or exposure at the latest visit who also have documentation that their cessation interest was assessed or that they received advice to quit.	**Institute for Clinical Systems Improvement (ICSI)** **Contact Information:** http://www.icsi.org/
NQF 0060	**Title:** Hemoglobin A1c test for pediatric patients **Description:** Percentage of pediatric patients with diabetes with a HBA1c test in a 12-month measurement period.	**NCQA** **Contact Information:** www.ncqa.org
NQF 0106	**Title:** Diagnosis of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents **Description:** Percentage of patients newly diagnosed with attention deficit hyperactivity disorder (ADHD) whose medical record contains documentation of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) or Diagnostic and Statistical Manual for Primary Care (DSM-PC) criteria being addressed.	**ICSI** **Contact Information:** http://www.icsi.org/
NQF 0107	**Title:** Management of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents **Description:** Percentage of patients diagnosed with attention deficit hyperactivity disorder (ADHD) and on first-line medication whose medical record contains documentation of a follow-up visit twice a year.	**ICSI** **Contact Information:** http://www.icsi.org/

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0108	**Title:** ADHD: Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication. **Description:** a. Initiation Phase: Percentage of children 6 – 12 years of age as of the Index Prescription Episode Start Date with an ambulatory prescription dispensed for and ADHD medication and who had one follow-up visit with a practitioner with prescribing authority during the 30-Day Initiation Phase b. Continuation and Maintenance (C&M) Phase: Percentage of children 6 – 12 years of age as of the Index Prescription Episode Start Date with an ambulatory prescription dispensed for ADHD medication who remained on the medication for at least 210 days and who in addition to the visit in the Initiation Phase had at least two additional follow-up visits with a practitioner within 270 days (9 months) after the Initiation Phase ends.	**NCQA** **Contact Information:** www.ncqa.org
NQF 0110	**Title:** Bipolar Disorder and Major Depression: Appraisal for alcohol or chemical substance use **Description:** Percentage of patients with depression or bipolar disorder with evidence of an initial assessment that includes an appraisal for alcohol or chemical substance use	**Center for Quality Assessment and Improvement in Mental Health** **Contact Information:** http://www.cqaimh.org/
NQF 0299	**Title:** Surgical Site Infection Rate **Description:** Percentage of surgical site infections occurring within thirty days after the operative procedure if no implant is left in place or with one year if an implant is in place in patients who had an NHSN operative procedure performed during a specified time period and the infection appears to be related to the operative procedure.	**Centers for Disease Control and Prevention (CDC)** **Contact Information:** http://www.cdc.gov/
NQF 0471	**Title:** Cesarean Rate for low-risk first birth women (aka NTSV CS rate) **Description:** Percentage of low-risk first birth women (aka NTSV CS rate: nulliparous, term, singleton, vertex) with a Cesarean rate that has the most variation among practicioners, hospitals, regions and states. Unlike other cesarean measures, it focuses attention on the proportion of cesarean births that is affected by elective medical practices such as induction and early labor admission. Furthermore, the success (or lack thereof) of management of the first labor directly impacts the remainder of the woman's reproductive life (especially given the current high rate of repeat cesarean births).	**California Maternal Quality Care Collaborative (CMQCC)** **Contact Information:** http://cmqcc.org/

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information
NQF 0513	**Title:** Use of Contrast: Thorax CT **Description:** Thorax CT – Use of combined studies (with and without contrast)	**CMS** **Contact Information:** http://www.cms.hhs.gov/
NQF 0519	**Title:** Diabetic Foot Care and Patient Education Implemented **Description:** Percent of diabetic patients for whom physician-ordered monitoring for the presence of skin lesions on the lower extremities and patient education on proper foot care were implemented during their episode of care	**CMS** **Contact Information:** http://www.cms.hhs.gov/
Not applicable	**Title:** Hysterectomy rates **Description:**	
Not applicable	**Title:** Appropriate antibiotic use for ear infections **Description:**	
Not applicable	**Title:** Statin after Myocardial Infarction **Description:**	
Not Applicable	**Title:** 30 day Readmission Rate **Description:**	
Not Applicable	**Title:** 30 Readmission Rate following deliveries **Description**:	
Not applicable	**Title**: Use of CT scans **Description**: Number of repeat CT scans within 60 days	

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Comment: Some commenters requested that CMS implement feedback reports early in the process that document whether EPs are successfully participating in the PQRI Program, the EHR incentive program, and the e-prescribing program, and that the report communicate whether the information received by CMS for these programs was successfully submitted and received.

Response: As the PQRI and e-prescribing programs are beyond the scope of this rule, we do not address suggestions that we implement feedback reports related to these programs. The criteria to qualify for the EHR incentive payments are based on results automatically calculated by EPs' certified EHR technology, as attested by the EPs. As such, we believe that the EP will be able to determine whether they have reported the required clinical quality measures to CMS or the State, rendering it unnecessary that CMS or the State provide the EP with a feedback report. We expect the system through which EPs, must submit information would indicate successful receipt beginning the first year of Stage 1.

Comment: A commenter indicated that the clinical quality measure that addresses tobacco use and the measure that addresses smoking status apply to different age groups, and stated that they should be consistent. A number of commenters recommended removing smoking status as an objective from meaningful use section of this final rule, and only including it in the clinical quality measures in order to avoid confusion.

Response: We are in agreement that the meaningful use objective and the clinical quality measure address the same topic of smoking. The clinical quality measure requires measurement of a clinical action performed by the EP to address the negative consequences of smoking, whereas the meaningful use objective seeks to make sure smokers are identified. Additionally, the age for recording smoking status for meaningful use is 13 years and older, and the population addressed by the clinical quality measure is 18 years and older, thus they are different with respect to intent of the objective/measure and the age population. For the clinical quality measure, we are keeping the age range at 18 years and older because the measure is currently NQF endorsed with these specifications. We will consider merging these in the future to reconcile the age range.

Comment: Some commenters stated that reporting of ambulatory quality measures should remain voluntary for EPs, based on the view that many process measures do not correlate with outcomes and are not evidence based. A process measure focuses on a process which leads to a certain outcome, meaning that a scientific basis exists for believing that the process, when executed well, will increase the probability of achieving a desired outcome. A commenter stated that EPs serving needy patients, minorities, and populations with lower socioeconomic levels will experience lower performance on many clinical quality measures, and therefore will be deterred from participating in the EHR incentive program.

Response: The EHR incentive program is voluntary. Similar to other Medicare quality measure reporting programs, EPs are not required to satisfy minimum clinical quality performance levels in order to qualify for the EHR payment incentive, but rather merely report on their ambulatory quality measure results. Thus, as currently structured, we do not believe the requirement that EPs report clinical quality measures would deter EPs who serve minority patients or patients of lower socioeconomic status or otherwise disadvantaged from participating in the program.

After consideration of the public comments received, we are finalizing the basic requirement that EPs submit results for clinical quality measures.

This requirement applies to both the 2011 and 2012 reporting periods (and will potentially continue to apply, until CMS issues a subsequent final rule that supplants this final rule). We are limiting the clinical quality measures to those for which electronic specifications are available (posted by CMS on the Web site at the time of display of this final rule.) These measures are listed in Table 6 of this final rule for EPs. They constitute the clinical quality measures "specified by CMS" for the purposes of the ONC final rule (found elsewhere in this issue of the **Federal Register**) and are the measures that certified EHRs are required to be able to calculate. Of these, nine EP measures have preliminary electronic specifications for which we provided links for in the proposed rule. The remaining 35 clinical quality measures for EPs were electronically specified more recently and posted on the CMS Web site by the date of display of this final rule. We are finalizing only those measures for which there are available electronic specifications as of the date of display of this final rule. Although we are not finalizing all of 90 proposed clinical quality measures that were proposed for EPs in Table 3 (*see* 75 FR 1874–1889) of the proposed rule, because of lack of electronic specifications, our intent is to include all of them in our proposed Stage 2 requirements, or to propose alternative measures following a transparent process that includes appropriate consultation with stakeholders and other interested parties. In addition, we plan to add new measures to fill gaps where measures were not previously proposed, such as in behavior and mental health (*e.g.,* depression and alcoholism). Certified EHR technology must be able to calculate each measure numerators, denominators and exclusions for each of the clinical quality measures finalized for the EHR incentive program. Table 6 conveys the applicable NQF measure number and PQRI implementation number (that is, the number used in the PQRI program to identify the measure as implemented in PQRI (for the 2010 PQRI measures list see *https://www.cms.gov/PQRI/Downloads/2010_PQRI_MeasuresList_111309.pdf*)), title, description, the owner/steward, and a link to existing electronic specifications. The NQF number is an identifying number that is associated with the NQF endorsed measure number. All of the clinical quality measures in Table 6 are NQF endorsed and have broad applicability to the range of Medicare designated specialties, and the services provided by EPs who render services to Medicare and Medicaid beneficiaries and many others. In terms of CMS and HHS healthcare quality priorities, clinical quality PQRI measures numbered 1, 2, 3, 5, and 7 address high priority chronic conditions, namely diabetes, coronary artery disease, and heart disease. Clinical quality PQRI measures numbered 66, 110, 111, 112, 113, 114, 115, and 128 support screening and prevention all of which is a high CMS and HHS priority.

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TABLE 6: Clinical Quality Measures for Submission by Medicare or Medicaid EPs for the 2011 and 2012 Payment Year[4]

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0059 PQRI 1	**Title:** Diabetes: Hemoglobin A1c Poor Control **Description:** Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c > 9.0%.	**National Committee for Quality Assurance (NCQA)** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0064 PQRI 2	**Title:** Diabetes: Low Density Lipoprotein (LDL) Management and Control **Description:** Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had LDL-C < 100 mg/dL).	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0061 PQRI 3	**Title:** Diabetes: Blood Pressure Management **Description:** Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had blood pressure <140/90 mmHg.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0081 PQRI 5	**Title:** Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) **Description**: Percentage of patients aged 18 years and older with a diagnosis of heart failure and LVSD (LVEF < 40%) who were prescribed ACE inhibitor or ARB therapy.	**American Medical Association-sponsored Physician Consortium for Performance Improvement (AMA-PCPI)** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

[4] *** In the event that new clinical quality measures are not adopted by 2013, the clinical quality measures in this Table would continue to apply.

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0070 PQRI 7	**Title:** Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI) **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD and prior MI who were prescribed beta-blocker therapy.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0041 PQRI 110	**Title:** Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old **Description:** Percentage of patients aged 50 years and older who received an influenza immunization during the flu season (September through February).	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0043 PQRI 111	**Title:** Pneumonia Vaccination Status for Older Adults **Description:** Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0031 PQRI 112	**Title:** Breast Cancer Screening **Description:** Percentage of women 40-69 years of age who had a mammogram to screen for breast cancer.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0034 PQRI 113	**Title:** Colorectal Cancer Screening **Description:** Percentage of adults 50-75 years of age who had appropriate screening for colorectal cancer.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0067 PQRI 6	**Title**: Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD **Description**: Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed oral antiplatelet therapy.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0083 PQRI 8	**Title:** Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD) **Description:** Percentage of patients aged 18 years and older with a diagnosis of heart failure who also have LVSD (LVEF < 40%) and who were prescribed beta-blocker therapy.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0105 PQRI 9	**Title:** Anti-depressant medication management: (a) Effective Acute Phase Treatment,(b)Effective Continuation Phase Treatment **Description:** The percentage of patients 18 years of age and older who were diagnosed with a new episode of major depression, treated with antidepressant medication, and who remained on an antidepressant medication treatment.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0086 PQRI 12	**Title:** Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation **Description:** Percentage of patients aged 18 years and older with a diagnosis of POAG who have been seen for at least two office visits who have an optic nerve head evaluation during one or more office visits within 12 months.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0088 PQRI 18	**Title:** Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy **Description:** Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0089 PQRI 19	**Title:** Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care **Description:** Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months.	**AMA-PCPI** **Contact Information**: cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0047 PQRI 53	**Title:** Asthma Pharmacologic Therapy **Description:** Percentage of patients aged 5 through 40 years with a diagnosis of mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0001 PQRI 64	**Title:** Asthma Assessment **Description:** Percentage of patients aged 5 through 40 years with a diagnosis of asthma and who have been seen for at least 2 office visits, who were evaluated during at least one office visit within 12 months for the frequency (numeric) of daytime and nocturnal asthma symptoms.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0002 PQRI 66	**Title:** Appropriate Testing for Children with Pharyngitis **Description:** Percentage of children 2-18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus (strep) test for the episode.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0387 PQRI 71	**Title:** Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer **Description:** Percentage of female patients aged 18 years and older with Stage IC through IIIC, ER or PR positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0385 PQRI 72	**Title:** Oncology Colon Cancer: Chemotherapy for Stage III Colon Cancer Patients **Description:** Percentage of patients aged 18 years and older with Stage IIIA through IIIC colon cancer who are referred for adjuvant chemotherapy, prescribed adjuvant chemotherapy, or have previously received adjuvant chemotherapy within the 12-month reporting period.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0389 PQRI 102	**Title:** Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients **Description:** Percentage of patients, regardless of age, with a diagnosis of prostate cancer at low risk of recurrence receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the prostate, OR radical prostatectomy, OR cryotherapy who did not have a bone scan performed at any time since diagnosis of prostate cancer.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0027 PQRI 115	**Title:** Smoking and Tobacco Use Cessation, Medical assistance: a. Advising Smokers and Tobacco Users to Quit, b. Discussing Smoking and Tobacco Use Cessation Medications, c. Discussing Smoking and Tobacco Use Cessation Strategies **Description:** Percentage of patients 18 years of age and older who were current smokers or tobacco users, who were seen by a practitioner during the measurement year and who received advice to quit smoking or tobacco use or whose practitioner recommended or discussed smoking or tobacco use cessation medications, methods or strategies.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0055 PQRI 117	**Title:** Diabetes: Eye Exam **Description:** Percentage of patients 18 -75 years of age with diabetes (type 1 or type 2) who had a retinal or dilated eye exam or a negative retinal exam (no evidence of retinopathy) by an eye care professional.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0062 PQRI 119	**Title:** Diabetes: Urine Screening **Description:** Percentage of patients 18 - 75 years of age with diabetes (type 1 or type 2) who had a nephropathy screening test or evidence of nephropathy.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0421 PQRI 128	**Title:** Adult Weight Screening and Follow-Up **Description:** Percentage of patients aged 18 years and older with a calculated BMI in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside parameters, a follow-up plan is documented.	**CMS/Quality Insights of Pennsylvania (QIP)** **Contact Information:** www.usqualitymeasures.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0056 PQRI 163	**Title:** Diabetes: Foot Exam **Description:** The percentage of patients aged 18 - 75 years with diabetes (type 1 or type 2) who had a foot exam (visual inspection, sensory exam with monofilament, or pulse exam).	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0074 PQRI 197	**Title:** Coronary Artery Disease (CAD): Drug Therapy for Lowering LDL-Cholesterol **Description:** Percentage of patients aged 18 years and older with a diagnosis of CAD who were prescribed a lipid-lowering therapy (based on current ACC/AHA guidelines).	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0084 PQRI 200	**Title:** Heart Failure (HF): Warfarin Therapy Patients with Atrial Fibrillation **Description:** Percentage of all patients aged 18 years and older with a diagnosis of heart failure and paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0073 PQRI 201	**Title:** Ischemic Vascular Disease (IVD): Blood Pressure Management **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January 1- November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and whose recent blood pressure is in control (<140/90 mmHg).	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0068 PQRI 204	**Title:** Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal coronary angioplasty (PTCA) from January 1-November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had documentation of use of aspirin or another antithrombotic during the measurement year.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0004	**Title:** Initiation and Engagement of Alcohol and Other Drug Dependence Treatment: (a) Initiation, (b) Engagement **Description:** The percentage of adolescent and adult patients with a new episode of alcohol and other drug (AOD) dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis and who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0012	**Title:** Prenatal Care: Screening for Human Immunodeficiency Virus (HIV) **Description:** Percentage of patients, regardless of age, who gave birth during a 12-month period who were screened for HIV infection during the first or second prenatal care visit.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0013	**Title:** Hypertension: Blood Pressure Measurement **Description:** Percentage of patient visits for patients aged 18 years and older with a diagnosis of hypertension who have been seen for at least 2 office visits, with blood pressure (BP) recorded.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0014	**Title:** Prenatal Care: Anti-D Immune Globulin **Description:** Percentage of D (Rh) negative, unsensitized patients, regardless of age, who gave birth during a 12-month period who received anti-D immune globulin at 26-30 weeks gestation.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0018	**Title:** Controlling High Blood Pressure **Description:** The percentage of patients 18-85 years of age who had a diagnosis of hypertension and whose BP was adequately controlled during the measurement year	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0024	**Title:** Weight Assessment and Counseling for Children and Adolescents **Description:** Percentage of patients 2 -17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or OB/GYN and who had evidence of BMI percentile documentation, counseling for nutrition and counseling for physical activity during the measurement year.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0028	**Title:** Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention **Description:** Percentage of patients aged 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use one or more times within 24 months b. Percentage of patients aged 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention.	**AMA-PCPI** **Contact Information:** cpe@ama-assn.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Core
NQF 0032	**Title:** Cervical Cancer Screening **Description:** Percentage of women 21-64 years of age, who received one or more Pap tests to screen for cervical cancer	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0033	**Title:** Chlamydia Screening for Women **Description:** Percentage of women 15- 24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0036	**Title:** Use of Appropriate Medications for Asthma **Description:** Percentage of patients 5 - 50 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement year. Report three age stratifications (5-11 years, 12-50 years, and total).	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0038	**Title:** Childhood Immunization Status **Description:** Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio(IPV), one measles, ,mumps and rubella (MMR); two H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); two hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	Alternate Core
NQF 0052	**Title:** Low Back Pain: Use of Imaging Studies **Description:** Percentage of patients with a primary diagnosis of low back pain who did not have an imaging study (plain x-ray, MRI, CT scan) within 28 days of diagnosis.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title & Description	Clinical Quality Measure Steward & Contact Information	Electronic Measure Specifications Information	Core Clinical Quality Measure
NQF 0075	**Title:** Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control **Description:** Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous transluminal angioplasty (PTCA) from January 1-November1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year and who had a complete lipid profile performed during the measurement year and whose LDL-C<100 mg/dL.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	
NQF 0575	**Title:** Diabetes: Hemoglobin A1c Control (<8.0%) **Description:** The percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c <8.0%.	**NCQA** **Contact Information:** www.ncqa.org	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage	

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e. Clinical Quality Measures Reporting Criteria for EPs

For the 2011 and 2012 EHR reporting periods, to satisfy the requirements for reporting on clinical quality measures for Medicare under section 1848(o)(2)(A)(i) and (iii) of the Act and for Medicaid under section 1903(t)(6)(C) of the Act, we proposed to require that each EP submit information on two measure groups: a core measures group (Table 4 of the proposed rule see 75 FR 1890), and the subset of clinical measures most appropriate given the EP's specialty (Tables 5 through 19 specialty group measures see 75 FR 1891 through 1895). For the core measure group, we stated our belief that the clinical quality measures were sufficiently general in application and of such importance to population health; we would require that all EPs treating Medicare and Medicaid patients in the ambulatory setting report on all of the core measures as applicable for their patients.

We proposed that with the inclusion of measures applicable to targeting children and adolescents and the wide applicability of the measures like Blood Pressure Management, we believed the proposed core set of clinical quality measures and specialty measures was broad enough to enable reporting by all EPs. However, we encouraged commenters to identify the EPs in question and propose specific remedies if the public believed that other EPs would not have sufficient patients in the denominator of these core measures.

Comment: Several commenters requested clarification about the core measures group. Many comments were received regarding the inclusion of a core measure set for EPs. Some commenters favored the inclusion of one or more core measures (for example, preventive care) and others indicated core measures were essential for improving the quality of care. Conversely, numerous commenters suggested eliminating the core measure set for EPs. The primary reason offered by commenters for excluding core measures was that these clinical quality measures were outside their scope of practice and/or not relevant to their specific patient population. A commenter requested that the core set of clinical quality measures be better defined and/or increased for each reporting period. Many commenters indicated the clinical quality measures included in the core measure set are not appropriate to all EPs and specialists (for example, EPs that do not have direct physical access to the patients such as teleradioloists, EPs that do not routinely report blood pressure in patients with diagnosed hypertension, such as dermatologists) and they would not be able to report on these clinical quality measures. Many commenters supported reporting exclusions. A commenter recommended the use of PQRI 128/NQF 0421 Preventive Care and Screening: BMI Screening and Follow-up as a core clinical quality measure. Other commenters indicated these clinical quality measures were important for improving care and the core measure set should be expanded.

Response: After considering the comments, we agree there may be circumstances such that the core clinical quality measures are not applicable for specific patient populations and/or a specific EP's scope of practice. In such circumstances we anticipate that the patients will not appear in the denominator at all or will be excluded. We have defined the core measure set for EPs in Table 7 of this final rule, and these core measures will be required for Stage 1. We expanded the core measures set to include three alternate measures, as well as added PQRI 128/NQF0421 as a required core measure, based on commenters feedback. Although we require all EPs to report the core measures, there is no requirement that the EP have any particular number of patients in the denominator, which could be zero as calculated by the EHR. Therefore we have changed the reporting criteria to require EPs to report on all three core measures (as shown in Table 7, below), and three additional clinical quality measures selected from Table 6 (other than the core or alternate core measures listed in Table 6). The clinical quality measures included in this final rule reflect a subset of measures that were included in the proposed rule (see 75 FR 1874 through 1889). The clinical quality measures included in Table 6 of this final rule were selected from the Tables included in the proposed rule, based on having electronic specifications fully developed by the date of display of this final rule.

Comment: Many commenters indicated that NQF 0022 Drugs to be avoided in the elderly is an inappropriate clinical quality measure and should be removed. The rationale given for removal is that the numerator (at least one prescription for any drug to be avoided in the elderly in the measurement year or at least two different drugs to be avoided in the elderly in the measurement year) tends to be very small. Others considered poly-pharmacy a more significant problem in the elderly than avoidance of specific drugs. A number of commenters indicated this clinical quality measure should include a list of the drugs to be avoided.

Response: We agree with the concerns expressed by the commenters and have removed the measure NQF 0022. Additionally, electronic specifications are not available for this measure by the date of display of this final rule making this measure impractical to use for Stage 1. We will consider this measure in future rulemaking.

After consideration of the public comments received, we are finalizing the requirement that all EPs must submit calculated results for three core measures using the certified EHR technology. However, we are finalizing only two of the clinical quality measures that were proposed as "core measures" in the proposed rule. The other core measures presented in Table 6 of this final rule were selected because they have broad applicability, support prevention, were recommended by commenters, and have electronic specifications by the date of display of this final rule. Insofar as a measure does not apply to patients treated by the EP, this will be reflected in the calculation of the clinical quality measure either by the patient not being included in the denominator for the measure or the patient being excluded. Therefore, it is not necessary for CMS to delineate for a particular specialty which measures may or not apply. We note that to qualify as a meaningful EHR user, EPs need only report the required clinical quality measures; they need not satisfy a minimum value for any of the numerator, denominator, or exclusions fields for clinical quality measures. The value for any or all of those fields, as reported to CMS or the States, may be zero if these are the results as displayed by the certified EHR technology. Thus, the clinical quality measure requirement for 2011 and beginning in 2012 is a reporting requirement and not a requirement to meet any particular performance standard for the clinical quality measure, or to in all cases have patients that fall within the denominator of the measure.

The three core measures that EPs will be required to report are: [NQF 0013: Hypertension: Blood Pressure Management; NQF 0028: Preventative Care and Screening Measure Pair: a. Tobacco Use Assessment b. Tobacco Cessation Intervention; and NQF0421/PQRI 128: Adult Weight Screening and Follow-up]. Insofar as the denominator for one or more of the core measures is zero, EPs will be required to report results for up to three alternate core measures [NQF 0041/PQRI 110: Preventative Care and Screening:

Influenza Immunization for Patients ≥50 Years Old; NQF 0024: Weight Assessment and Counseling for Children and Adolescents; and NQF 0038: Childhood Immunization Status]. We believe this final set of core clinical quality measures provides EPs a greater opportunity for successful reporting. The EP will *not* be excluded from reporting any core or alternate clinical quality measure because the measure does not apply to the EPs scope of practice or patient population. The expectation is that the EHR will automatically report on each core clinical quality measure, and when one or more of the core measures has a denominator of zero then the alternate core measure(s) will be reported. If all six of the clinical quality measures in Table 7 have zeros for the denominators (this would imply that the EPs patient population is not addressed by these measures), then the EP is still required to report on three additional clinical measures of their choosing from Table 6 in this final rule. In regard to the three additional clinical quality measures, if the EP reports zero values, then for the remaining clinical quality measures in Table 6 (other than the core and alternate core measures) the EP will have to attest that all of the other clinical quality measures calculated by the certified EHR technology have a value of zero in the denominator, if the EP is to be exempt from reporting any of the additional clinical quality measures (other than the core and alternate core measures) in Table 6. Thus, EPs are not penalized in the Stage 1 reporting years as long as they have adopted a certified EHR and that EHR calculates and the EP submits the required information on the required clinical quality measures, and other meaningful use requirements as defined in this final rule in section II.A.2.d.1 of this final rule.

Table 7, below, shows the core measure groups for all EPs for Medicare and Medicaid to report.

TABLE 7: Measure Group: Core for All EPs, Medicare and Medicaid

NQF Measure Number & PQRI Implementation Number	Clinical Quality Measure Title
NQF 0013	**Title:** Hypertension: Blood Pressure Measurement
NQF 0028	**Title:** Preventive Care and Screening Measure Pair: a. Tobacco Use Assessment b. Tobacco Cessation Intervention
NQF 0421 PQRI 128	**Title:** Adult Weight Screening and Follow-up
	Alternate Core Measures
NQF 0024	**Title:** Weight Assessment and Counseling for Children and Adolescents
NQF 0041 PQRI 110	**Title:** Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old
NQF 0038	**Title:** Childhood Immunization Status

We proposed that EPs were to submit calculated results on at least one of the sets listed in Tables 5 and 19 as specialty groups (see 75 FR 1891–1895). The specialty groups were Cardiology, Pulmonary Diseases, Endocrinology, Oncology, Proceduralist/Surgery, Primary Care Physicians, Pediatrics, Obstetrics and Gynecology, Neurology, Psychiatry, Ophthalmology, Podiatry, Radiology, Gastroenterology, and Nephrology.

We recognized that clinical quality measures as specified by measures developers and as endorsed by the NQF were not specific to particular specialties. Rather, the denominator of clinical quality measures and the applicability of a measure is determined by the patient population to whom the measure applies and the services rendered by the particular EP.

Nevertheless, we grouped the proposed measures according to the types of patients commonly treated and services rendered by EPs of various specialties. We did this for purposes similar to measures groups used in PQRI which, however, are based on clinical conditions, rather than specialty types. We proposed that the general purpose of each specialty measures grouping was to have standardized sets of measures, all of which must be reported by the EP for the self-selected specialty measures groups in order to meet the reporting requirements. We expected to narrow down each set to a required subset of three-five measures based on the availability of electronic measure specifications and comments received.

We also proposed to require for 2011 and 2012 that EPs would select a specialty measures group, on which to report on all applicable cases for each of the measures in the specialty group. We also proposed that the same specialty measures group selected for the first payment year would be required for reporting for the second payment year. We invited comment on whether there were EPs who believed no specialty group would apply to them. In accordance with public comments, we noted that we would specify in the final rule which EP specialties would be exempt from selecting and reporting on a specialty measures group. As stated, we proposed, EPs that are so-designated would be required to attest, to CMS or the States, to the inapplicability of any of the specialty groups and would not

be required to report information on clinical quality measures from a specialty group for 2011 or 2012, though the EP would still be required to report information on all of the clinical quality measures listed in the proposed core measure set (see 75 FR 1890).

Comment: Several commenters asked if certain specialties, such as chiropractors, audiologists, allergist and immunology, otolaryngologists, etc., could be exempt from having to report all specific clinical quality specialty measures. Many of these EPs indicated the clinical quality measures included in Table 3 were not relevant to their specific practice and/or patient population. Other commenters requested that specialty groups be created for specialties not included in the proposed rule measure groups, (for example, chiropractors, dentists, dermatologists, infectious disease, pediatric oncology, neurosurgery, interventional radiology, plastic & reconstructive surgery, physical therapists, occupational therapists, eye care specialists, family planning, genetics, ear/nose/throat, and nutritionists providers, etc.). Other commenters indicated that specialty clinical quality measures were specific to a subset of patients, but were not broadly applicable to their specialty for treating other conditions within their specialty area. Other commenters asked that CMS reconsider allowing EPs to attest only and be exempt from reporting if no applicable clinical quality measures specialty group exists for them. Another commenter indicated support of specific measure sets for different clinical specialties. Many commenters supported the elimination of specialty groups altogether as a mandatory set and instead supported the reporting of a fixed number of relevant clinically quality measures regardless of the specialty group. A commenter asked for a definition of "specialist" which is not included in the proposed rule. Several commenters expressed concern about the large number of clinical quality measures in certain measure groups versus other measure groups (for example, the primary care, pediatric and ob/gyn measure groups) as well as the applicability of clinical quality measures assigned to primary care EPs when they do not manage conditions that are typically referred to a specialist for example, ischemic vascular disease. A commenter requested clarification and suggestions on how to select a clinical quality measure group. Several commenters wanted clarification on the proposed EP Specialty Measures Tables (see 75 FR 1874), and whether the EPs are accountable for only the clinical quality measures for their specialty. One comment indicated agreement with CMS regarding requiring EPs to report on the same specialty measure groups for 2011 and 2012 and another commenter indicated that CMS should not delay reporting of clinical quality measures as early adopters of EHRs will be ready to report. A few commenters suggested adding NQF 0033 Chlamydia screening in women to all other appropriate specialty clinical quality measure groups. A commenter indicated that PQRI #112, 113, and NQF 0032 should be removed from the oncology clinical quality specialty measure group as oncologists do not perform routine cancer screenings.

Response: We are appreciative of the detail provided by commenters to the potential inapplicability of the proposed specialty measures groups to various practitioner types or to the inapplicability of certain measures within groups to the specialties designated. Our primary purpose, similar to the core measures, was to encourage a certain consistency in reporting of clinical quality measures by EPs. However, after consideration of the comments we do not believe that the proposed specialty measures groups are sufficient to have a robust set of specialty measures groups. Further, given the lack of electronic specifications or final development of many of these measures, requiring specialty measures groups becomes even more impractical. We expect that electronic specifications will be developed for measures which would allow for a broadly applicable set of specialty measures groups in the future.

After consideration of the public comments received, we removed the requirement for EPs to report on specialty measures groups as proposed. We intend to reintroduce the proposed rule's specialty group reporting requirement in Stage 2 with at least as many clinical quality measures by specialty as we proposed for Stage 1 in the proposed rule. We expect to use a transparent process for clinical quality measure development that includes appropriate consultation with specialty groups and other interested parties, and we expect that electronic specifications will be developed for all of the measures that we originally proposed for Stage 1 or alternative related measures, which would allow for a broadly applicable set of specialty measures groups and promote consistency in reporting of clinical quality measures by EPs. Also, in consideration of public comments received, we are finalizing the requirement (in addition to the core measure requirement) that EPs must report on three measures to be selected by the EP from the set of 38 measures as shown in Table 6, above. As stated previously, in regard to the three additional clinical quality measures, if the EP reports zero values, then for the remaining clinical quality measures in Table 6 (other than the core and alternate core measures) the EP will have to attest that all of the other clinical quality measures calculated by the certified EHR technology have a value of zero in the denominator. In sum, EPs must report on six total measures, three core measures (substituting alternate core measures where necessary) and three additional measures (other than the core and alternate core measures) selected from Table 6.

We also proposed that although we do not require clinical quality measure reporting electronically until 2012, we would require clinical quality reporting through attestation in the 2011 payment year. We solicited comment on whether it may be more appropriate to defer some or all clinical quality reporting until the 2012 payment year. If reporting on some but not all measures in 2011 was feasible, we solicited comment on which key measures should be chosen for 2011 and which should be deferred until 2012 and why. We discuss comments received regarding the reporting method for clinical quality measures in section II.A.3.h. of this final rule.

f. Clinical Quality Measures for Electronic Submission by Eligible Hospitals and CAHs

Our proposed rule would have required eligible hospitals and CAHs to report summary data to CMS on the set of clinical quality measures identified in Table 20 and 21 of the proposed rule (see 75 FR 1896–1899), with eligible hospitals attesting to the measures in 2011 and electronically submitting these measures to CMS using certified EHR technology beginning in 2012. For hospitals eligible for only the Medicaid EHR incentive program, we proposed that reporting would be to the States. In the proposed rule, for eligible hospitals under both programs, we proposed that they would have to also report on the clinical quality measures identified in Table 21 of the proposed rule to meet the requirements for the reporting of clinical quality measures for the Medicaid program incentive (see 75 FR 1896 through 1900). Tables 20 and 21 of the proposed rule (see 75 FR 1896 through 1900) conveyed the clinical quality measure's title, number, owner/

developer and contact information, and a link to existing electronic specifications where applicable.

We included in the proposed hospital measures set several clinical quality measures which have undergone development of electronic specifications. These clinical quality measures have been developed for future RHQDAPU consideration. The electronic specifications were developed through an interagency agreement between CMS and ONC to develop interoperable standards for EHR electronic submission of the Emergency Department Throughput, Stroke, and Venous Thromboembolism clinical quality measures on Table 20 of the proposed rule (see 75 FR 1896 through 1899). We also proposed to test the submission of these clinical quality measures in Medicare (see 75 FR 43893). The specifications for the RHQDAPU clinical quality measures for eligible hospitals and CAHs that are being used for testing EHR-based submission of these clinical quality measures can be found at *http://www.hitsp.org/ConstructSet_Details.aspx?&PrefixAlpha=5&PrefixNumeric=906* (A description of the clinical quality measure, including the clinical quality measure's numerator and denominator, can be found here as well.) Other measures we proposed derived from the RHQDAPU program or were measures we considered important for measuring or preventing adverse outcomes. In addition to risk standardized readmission clinical quality measures, we proposed that non-risk-adjusted readmission rates also be reported. For the proposed rule, we also considered HIT Standards Committee recommendations, including the Committee's recommendation to include a measure on Atrial Fibrillation Receiving Anticoagulation Therapy which was included on Table 20 of the proposed rule Our proposed rule noted that we did not propose one measure recommended by the HIT Standards Committee: Surgery patients who received Venous Thromboembolism prophylaxis within 24 hours period to surgery to 24 hours after surgery end time. We noted that the measure is a current clinical quality measure collected in the RHQDAPU program through chart abstraction for all applicable patients (SCIP–VTE–2), and that the VTE–2 clinical quality measure in Table 20 of the proposed rule (*see* 75 FR 1896 through 1899) was a parallel clinical quality measure to SCIP–VTE–2. SCIP–VTE–2 includes surgical and non-surgical patients, and can be more easily implemented for the EHR incentive program because electronic specifications had been completed. We added SCIP–VTE–2 for future consideration.

Comment: Many commenters recommended reducing the number of eligible hospital clinical quality measures and indicated that such a large number of measures would pose a significant financial and administrative burden on hospitals. Commenters suggested a variety of solutions which include: Eliminating duplication between clinical quality measures and meaningful use objectives and associated measures, reducing the number of clinical quality measures for reporting and allowing organizations to select a limited number of clinical quality measures on which they would like to report.

We received comments supporting many of the measures in the proposed rule including Venous Thromboembolism, Emergency Department, Stroke, RHQDAPU, and measures that are evidence-based that could improve the quality of care. Others recommended additional clinical quality measures, changes to the specifications for clinical quality measures or the elimination of certain clinical quality measures such as risk adjusted re-admission measures or measures not applicable to CAHs. Many commenters supported the process through which the electronic specifications were developed for the Emergency Department Throughput, Stroke and Venous Thromboembolism measures while also pointing out the length of time necessary to adequately develop electronic specifications and test the clinical quality measures. Many commented that the remaining measures had not been electronically specified or had otherwise not completed development and would not be ready in time for the 2011–2012 implementation. Others stated their concerns about duplicate reporting systems and the belief that the HITECH Act reporting requirements should be based on the RHQDAPU program, similar to the conceptual framework of hospitals value-based purchasing plan. Others pointed to measures that are already currently reported in RHQDAPU and the statutory provision that clinical quality measure reporting required for the HITECH Act should seek to avoid duplicative and redundant reporting of measures reported under RHQDAPU.

Response: We are appreciative of the comments supporting many of the clinical quality measure sets and the process utilized for electronically specifying the Emergency Department Throughput, Stroke, and Venous Thromboembolism sets. As we have discussed for the EP measures, we agree that we should limit the required clinical quality measures to those measures for where there are electronic specifications as of the date of display of this final rule. This will allow EHR vendors sufficient time to ensure that certified EHR technology will be able to electronically calculate the measures. Therefore, we are not finalizing those clinical quality measures that either have not been fully developed, are currently only specified for claims based calculation, or for which there are not fully developed electronic specifications as of the date of display of this final rule. Accordingly, we are only finalizing the 15 measures listed in Table 10 of this final rule. We note that none of these measures are duplicate measures which are currently required for reporting in the RHQDAPU program. We therefore do not need to address the issue of duplicate or redundant reporting. We will consider adding, changing, developing, and eliminating duplicative clinical quality measures and meaningful use objectives/associated measures in future rulemaking.

Table 8, shows the proposed clinical quality measures for submission by Medicare and Medicaid Eligible Hospitals for the 2011 and 2012 payment year as stated in the proposed rule (see 75 FR 1896–1899) for EPs, but that are not being finalized. Table 9, shows the proposed alternative Medicaid clinical quality measures for Medicaid eligible hospitals in the proposed rule (see 75 FR 1899–1900). Tables 8 and 9 convey the NQF measure number, clinical quality measure title and description, and clinical quality measure steward and contact information. The measures listed below in Tables 8 and 9 do not have electronic specifications finished before the date of display of this final rule, thus we have eliminated these measures for this final rule and will consider the addition of these measures in future rulemaking. Also several measures listed below were only concepts at the time of publication of the proposed rule (that is, Hospital Specific 30 day Rate following AMI admission, Hospital Specific 30 day Rate following Heart Failure admission, Hospital Specific 30 day Rate following Pneumonia admission, and All-Cause Readmission Index). These concept measures were not developed or electronically specified clinical quality measures, nor NQF endorsed; and there was not adequate time to consider these concepts for development for this final rule. Therefore, the concepts listed

below will be considered in future rulemaking.

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TABLE 8: Proposed Clinical Quality Measures for Submission by Medicare or Medicaid Eligible Hospitals for the 2011 and 2012 Payment Year; Included in the Proposed Rule (see 75 FR 1896 through 1899) and Not in the Final Rule

Measure Number Identifier	Measure Title, Description & Measure Developer
Emergency Department (ED)-3 NQF 0496	**Title:** Emergency Department Throughput – discharged patients Median Time from ED Arrival to ED Departure for Discharged ED Patients **Description:** Median Time from ED arrival to time of departure from the ED for patients discharged from the ED **Measure Developer**: CMS/OFMQ
RHQDAPU AMI-8a NQF 0163	**Title:** Primary PCI Received Within 90 Minutes of Hospital Arrival **Description:** Acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary PCI during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less **Measure Developer:** CMS/OFMQ
RHQDAPU PN-3b NQF 0148	**Title:** Blood Cultures Performed in the Emergency Department Prior to Initial Antibiotic Received in Hospital **Description:** Pneumonia patients whose initial emergency room blood culture specimen was collected prior to first hospital dose of antibiotics. This measure focuses on the treatment provided to Emergency Department patients prior to admission orders. **Measure Developer:** CMS/OFMQ
RHQDAPU AMI-2 NQF 0142	**Title:** Aspirin Prescribed at Discharge **Description:** Acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge **Measure Developer:** CMS/OFMQ
RHQDAPU AMI-3 NQF 0137	**Title:** Angiotensin Converting Enzyme Inhibitor(ACEI) or Angiotensin Receptor Blocker (ARB) for Left Ventricular Systolic Dysfunction (LVSD) **Description:** Acute myocardial infarction (AMI) patients with left ventricular systolic dysfunction (LVSD) who are prescribed an ACEI or ARB at hospital discharge. For purposes of this measure, LVSD is defined as chart documentation of a left ventricular ejection fraction (LVEF) less than 40% or a narrative description of left ventricular systolic (LVS) function consistent with moderate or severe systolic dysfunction. **Measure Developer:** CMS/OFMQ
RHQDAPU AMI-5 NQF 0160	**Title:** Beta-Blocker Prescribed at Discharge **Description**: Acute myocardial infarction (AMI) patients who are prescribed a betablocker at hospital discharge **Measure Developer:** CMS/OFMQ

Measure Number Identifier	Measure Title, Description & Measure Developer
RHQDAPU AMI-READ NQF 0505	**Title &Description:** Hospital Specific 30 day Risk-Standardized Readmission Rate following AMI admission **Measure Developer:** CMS
Not applicable	**Title:** Hospital Specific 30 day Rate following AMI admission
RHQDAPU HF-READ NQF 0330	**Title &Description:** Hospital Specific 30 day Risk-Standardized Readmission Rate following Heart Failure admission **Measure Developer:** CMS/OFMQ
Not applicable	**Title:** Hospital Specific 30 day Rate following Heart Failure admission
RHQDAPU PNE-READ NQF 0506	**Title &Description:** Hospital Specific 30 day Risk-Standardized Readmission Rate following Pneumonia admission **Measure Developer:** CMS
Not applicable	**Title:** Hospital Specific 30 day Rate following Pneumonia admission
NQF 0528	**Title:** Infection SCIP Inf-2 Prophylactic antibiotics consistent with current recommendations **Description:** Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical procedure). **Measure Developer :** CMS/OFMQ
NQF 0302	**Title:** Ventilator Bundle **Description:** Percentage of intensive care unit patients on mechanical ventilation at time of survey for whom all four elements of the ventilator bundle are documented and in place. The ventilator bundle elements are: •Head of bed (HOB) elevation 30 degrees or greater (unless medically contraindicated); noted on 2 different shifts within a 24 hour period •Daily "sedation interruption" and daily assessment of readiness to extubate; process includes interrupting sedation until patient follow commands and patient is assessed for discontinuation of mechanical ventilation; Parameters of discontinuation include: resolution of reason for intubation; inspired oxygen content roughly 40%; assessment of patients ability to defend airway after extubation due to heavy sedation; minute ventilation less than equal to 15 liters/minute; and respiratory rate/tidal volume less than or equal to 105/min/L(RR/TV< 105)•SUD (peptic ulcer disease) prophylaxis•DVT (deep venous thrombosis) prophylaxis **Measure Developer:** IHI

Measure Number Identifier	Measure Title, Description & Measure Developer
NQF 0298	**Title:** Central Line Bundle Compliance **Description:** Percentage of intensive care patients with central lines for whom all elements of the central line bundle are documented and in place. The central line bundle elements include:•Hand hygiene , •Maximal barrier precautions upon insertion •Chlorhexidine skin antisepsis •Optimal catheter site selection, with subclavian vein as the preferred site for non-tunneled catheters in patients 18 years and older •Daily review of line necessity with prompt removal of unnecessary lines **Measure Developer:** IHI
NQF 0140	**Title:** Ventilator-associated pneumonia for ICU and high-risk nursery (HRN) patients **Description:** Percentage of ICU and HRN patients who over a certain amount of days have ventilator-associated pneumonia **Measure Developer:** CDC
NQF 0138	**Title:** Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients **Description:** Percentage of intensive care unit patients with urinary catheter-associated urinary tract infections **Measure Developer:** CDC
NQF 0139	**Title:** Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients **Description:** Percentage of ICU and high-risk nursery patients, who over a certain amount of days acquired a central line catheter-associated blood stream infections over a specified amount of line-days **Measure Developer:** CDC
NQF 0329	**Title:** All-Cause Readmission Index (risk adjusted) **Description:** Overall inpatient 30-day hospital readmission rate. **Measure Developer**: United Health Group
Not applicable	**Title:** All-Cause Readmission Index **Description:** Overall inpatient 30-day hospital readmission rate.

TABLE 9: Proposed Alternative Medicaid Clinical Quality Measures for Medicaid Eligible Hospitals; Included in the Proposed Rule (see 75 FR 1899-1900) and Not in the Final Rule

NQF Measure Number	Measure Title, Description & Measure Developer
0341	**Title:** PICU Pain Assessment on Admission **Description:** Percentage of PICU patients receiving: a. Pain assessment on admission b. Periodic pain assessment. **Measure Developer:** Vermont Oxford Network
0348	**Title:** Iotrogenic pneumothorax in non-neonates (pediatric up to 17 years of age) **Description:** Percent of medical and surgical discharges, age under 18 years, with ICD-9-CM-CM code of iatrogenic pneumothorax in any secondary diagnosis field. **Measure Developer:** AHRQ
0362	**Title:** Foreign body left after procedure, age under 18 years **Description:** Discharges with foreign body accidentally left in during procedure per 1,000 discharges **Measure Developer:** AHRQ
0151	**Title:** Pneumonia Care PNE-5c Antibiotic **Description:** Percentage of pneumonia patients 18 years of age and older who receive their first dose of antibiotics within 6 hours after arrival at the hospital **Measure Developer:** CMS/OFMQ
0147	**Title:** Pneumonia Care PN-6 Antibiotic selection **Description:** Percentage of pneumonia patients 18 years of age or older selected for initial receipts of antibiotics for community-acquired pneumonia (CAP). **Measure Developer:** CMS/OFMQ
0356	**Title:** Pneumonia Care PN-3a Blood culture **Description:** Percent of pneumonia patients, age 18 years or older, transferred or admitted to the ICU within 24 hours of hospital arrival who had blood cultures performed within 24 hours prior to or 24 hours after arrival at the hospital. **Measure Developer:** CMS/OFMQ
0527	**Title:** Infection SCIP Inf-1 Prophylactic antibiotic received within 1 hour prior to surgical incision **Description:** Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received vancomycin or a fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within two hours prior to surgical incision. Due to the longer infusion time required for vancomycin or a fluoroquinolone, it is acceptable to start these antibiotics within two hours prior to incision time. **Measure Developer:** CMS/OFMQ

NQF Measure Number	Measure Title, Description & Measure Developer
0529	**Title:** Infection SCIP Inf-3 Prophylactic antibiotics discontinued within 24 hours after surgery end time **Description:** Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after *Anesthesia End Time*. **Measure Developer:** CMS/OFMQ

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Comment: Commenters stated that current health information technology is not capable of electronically collecting or reporting on clinical quality measures. Commenters also stated we should not require reporting on clinical quality measures that cannot easily be derived from EHRs. Other commenters believed the timeline was unreasonable to obtain the functionality required in the EHR system to report on these clinical quality measures and were concerned that there were no vocabulary standards.

Response: We agree with the comment that eligible hospitals should only be required to submit information that can be automatically obtained from certified EHR technology. As we discussed elsewhere, ONC's final rule (found elsewhere in this issue of the **Federal Register**) requires that certified EHR technology must be able to calculate clinical quality measures specified by us in this final rule. Standards for certified EHRs, including vocabulary standards, are included in ONC's final rule (found elsewhere in this issue of the **Federal Register**).

Comment: Commenters recommended that CMS conduct a pilot test of the NQF endorsed HITSP electronic specifications of measures in the proposed rule for Stage 1 prior to their adoption. Commenters requested CMS publish results of the pilot and use this information to inform the setting of Stage 2 and 3 objectives and clinical quality measures. Commenters also requested allowing adequate time for implementation after the pilot test before such measures are considered for certification, and 24 months before requiring them for meaningful use. One commenter stated that the Emergency Department Throughput, Stroke, and Venous Thromboembolism have not yet been thoroughly tested for automated reporting and data element capture. Additional commenters recommended that the measures selected for the eligible hospitals incentive program should be comprehensively standardized and tested in the field to ensure that they are thoroughly specified, clinically valid when the data are collected through the eligible hospitals system, feasible to collect, and are regularly updated and maintained with a well established process.

Response: We agree with the commenters that it is important to allow adequate time for pilot testing and implementation before clinical quality measures should be considered for certification, as well as requiring these measures for meaningful use. Emergency Department 1, Emergency Department 2, and Stroke 3, clinical quality measures for eligible hospitals and CAHs that are included in this final rule, were tested during the January 2010 Connectathon and demonstrated at the HIMSS 2010 Interoperability Showcase. Additionally, as part of the process of certification of EHR technology it is expected that certifying bodies will test the ability of EHR technology to calculate the clinical quality measures finalized in this final rule.

After consideration of the public comments received, eligible hospitals and CAHs will be required to report on each of the 15 clinical quality measures, as shown in Table 10. Requiring eligible hospitals and CAHs to report on each of the 15 clinical quality measures in the EHR incentive program is consistent with the RHQDAPU program, which requires reporting on all applicable quality measures. Eligible hospitals and CAHs will report numerators, denominators, and exclusions, even if one or more values as displayed by their certified EHR is zero. We note that to qualify as a meaningful EHR user, eligible hospitals and CAHs need only report the required clinical quality measures; they need not satisfy a minimum value for any of the numerator, denominator, or exclusions fields for clinical quality measures. The value for any or all of those fields, as reported to CMS or the States, may be zero if these are the results as displayed by the certified EHR technology. Thus, the clinical quality measure requirement for 2011 and beginning with 2012 is a reporting requirement and not a requirement to meet any particular performance standard for the clinical quality measure, or to in all cases have patients that fall within the denominator of the measure. Further, the criteria to qualify for the EHR incentive payments are based on results automatically calculated by eligible hospitals or CAHs certified EHR technology, as attested by the eligible hospital or CAH. As such, we believe that the eligible hospitals or CAHs will be able to determine whether they have reported the required clinical quality measures to CMS or the State, rendering it unnecessary that CMS or the State provide the eligible hospital or CAH with a feedback report, which provides information to eligible hospitals and CAHs as to whether they have reported their required clinical quality measures. We expect successful receipt of Medicare eligible hospitals and CAHs' information, beginning the first year of Stage 1.

We are finalizing Table 10, which conveys the clinical quality measure's title, number, owner/steward and contact information, and a link to existing electronic specifications.

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TABLE 10: Clinical Quality Measures for Submission by Eligible Hospitals and CAHs for Payment Year 2011-2012[5]

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
Emergency Department (ED)-1 NQF 0495	**Title:** Emergency Department Throughput – admitted patients Median time from ED arrival to ED departure for admitted patients **Description:** Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department **Measure Developer:** CMS/Oklahoma Foundation for Medical Quality (OFMQ)	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
ED-2 NQF 0497	**Title:** Emergency Department Throughput – admitted patients Admission decision time to ED departure time for admitted patients **Description:** Median time from admit decision time to time of departure from the emergency department of emergency department patients admitted to inpatient status **Measure Developer:** CMS/OFMQ	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-2 NQF 0435	**Title:** Ischemic stroke – Discharge on anti-thrombotics **Description:** Ischemic stroke patients prescribed antithromboti therapy at hospital discharge **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-3 NQF 0436	**Title:** Ischemic stroke – Anticoagulation for A-fib/flutter **Description**: Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-4 NQF 0437	**Title:** Ischemic stroke – Thrombolytic therapy for patients arriving within 2 hours of symptom onset **Description:** Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV t-PA was initiated at this hospital within 3 hours of time last known well. **Measure Developer**: The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-5 NQF 0438	**Title:** Ischemic or hemorrhagic stroke – Antithrombotic therapy by day 2 **Description:** Ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage

[5] * In the event that new clinical quality measures are not adopted by 2013, the clinical quality measures in this Table would continue to apply.

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
Stroke-6 NQF 0439	**Title:** Ischemic stroke – Discharge on statins **Description:** Ischemic stroke patients with LDL ≥ 100 mg/dL, or LDL not measured, or, who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-8 NQF 0440	**Title:** Ischemic or hemorrhagic stroke – Stroke education **Description:** Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Stroke-10 NQF 0441	**Title:** Ischemic or hemorrhagic stroke – Rehabilitation assessment **Description:** Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services. **Measure Developer**: The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
Venous Thromboembolism (VTE)-1 NQF 0371	**Title:** VTE prophylaxis within 24 hours of arrival **Description:** This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-2 NQF 0372	**Title:** Intensive Care Unit VTE prophylaxis **Description:** This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer). **Measure Developer**: The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage

Measure Number Identifier	Measure Title, Description & Measure Steward	Electronic Measure Specifications Information
VTE-3 NQF 0373	**Title:** Anticoagulation overlap therapy **Description:** This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications. Overlap therapy must be administered for at least five days with an international normalized ratio (INR) ≥ 2 prior to discontinuation of the parenteral anticoagulation therapy or the patient must be discharged on both medications. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-4 NQF 0374	**Title:** Platelet monitoring on unfractionated heparin **Description:** This measure assesses the number of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-5 NQF 0375	**Title:** VTE discharge instructions **Description:** This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, to home with home health, home hospice or discharged/transferred to court/law enforcement on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions. **Measure Developer:** The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage
VTE-6 NQF 0376	**Title:** Incidence of potentially preventable VTE **Description:** This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present on arrival) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date. **Measure Developer**: The Joint Commission	http://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp#TopOfPage

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We proposed that to satisfy the requirements of reporting on clinical quality measures under sections 1886(n)(3)(A)(iii) and 1903(t)(6)(C) of the Act for the 2011–2012 payment year, we would require eligible hospitals and CAHs to report on all EHR incentive clinical quality measures for which they have applicable cases, without regard to payer. We proposed that Medicare eligible hospitals and CAHs, who are also participating in the Medicaid EHR incentive program, will also be required to report on all Medicaid clinical quality measures for which the eligible hospital has applicable cases. We also proposed that to demonstrate an eligible hospital or CAH is a meaningful EHR user, the eligible hospital or CAH would be required to electronically submit information on each clinical quality measures for each patient to whom the clinical quality measure applies, regardless of payer, discharged from the hospital during the EHR reporting period and for whom the clinical quality measure is applicable. Although as proposed, we did not require clinical quality reporting electronically until 2012, we would begin clinical quality reporting though attestation in the 2011 payment year. We solicited comment on whether it may be more appropriate to defer some or all clinical quality reporting until the 2012 payment year. If reporting on some but not all measures in 2011 was feasible, we solicited comment on which key measures should be chosen for 2011 and which should be deferred until 2012 and why.

Comment: We received numerous comments strongly opposed to requiring the reporting of clinical quality measures by eligible hospitals prior to 2013, although some comments favored the reporting in 2011 and 2012. Comments in favor pointed to the importance of quality measurement to achieving improvement in healthcare quality. Those opposed to the reporting of clinical quality measures in 2011 and 2012 cited concerns as to the readiness of EHR technology for automated calculation and reporting of clinical quality measures as well as financial and administrative burden. Many commenters stated that measures should be fully automated and tested prior to implementation, and recommended the process for Emergency Department Throughput, Stroke, and Venous Thromboembolism measures where CMS developed the specifications and has in place a plan to test the submission of such measures for RHQDAPU. Commenters stated their expectation that the testing process would reveal important insights as to potential challenges of electronic submission. Numerous commenters opposed measures already in RHQDAPU and not able to be calculated by the EHR technology. Many commenters stated that electronic data submission should be developed through the RHQDAPU program rather than have a separate quality measure reporting program, such as the EHR incentive program. Further, commenters stated that RHQDAPU should provide the foundation for migration to electronic reporting. Numerous commenters were opposed to having a temporary data collection and reporting process through attestation that would need to be updated or replaced once CMS has the appropriate infrastructure in place. Many commenters stated that requiring hospitals to report summary data through attestation, without the ability for CMS to receive the summary data electronically, creates a dual reporting burden for measures currently in RHQDAPU. Many commenters stated concerns as to the timing of the certification process for EHRs since having a certified EHR is an essential element for quality incentives. Numerous commenters pointed out that only 15 of the proposed measures have electronic specifications currently available.

Response: We are sensitive to and appreciate the many comments urging us not to require the submission of clinical quality measures, through attestation or electronic submission, prior to 2013, based on lack of readiness of many of the proposed measures, fully automating and testing prior to implementation, burden, and the potential duplication of quality measures reporting requirements under the RHQDAPU and the EHR incentive payment programs. Having carefully considered these comments, we have sought to address them while still retaining the important goal of beginning the process of using the capacity of EHRs to promote improved quality of care in hospitals by providing calculated results of clinical quality measures. In terms of readiness, we are limiting the clinical quality measures to those measures having existing electronic specifications as of the date of display of this final rule. Additionally, as recommended by commenters, we will only require hospitals to submit that information that can be automatically calculated by their certified EHR technology. Thus we will require no separate data collection by the hospital, but require submission solely of that information that can be generated automatically by the certified EHR technology; that is, we only adopt those clinical quality measures where the certified EHR technology can calculate the results. Further, we are not adopting any measures which are already being collected and submitted in the RHQDAPU program. Therefore, we are imposing no duplicate reporting requirement on hospitals who participate in RHQDAPU. Through future rulemaking we will seek to align the EHR incentive program with RHQDAPU.

Comment: Some commenters stated that CMS contradicts itself, where the proposed rule states that Medicare eligible hospitals who are also participating in Medicaid EHR incentive program will need to report on all of the Medicaid clinical quality measures and where it says that Table 21 is an alternative set of clinical quality measures if the hospital does not have any patients in the denominators of the measures in Table 20. Many commenters requested clarification of the Medicare and Medicaid reporting.

Response: We agree that the description of the eligible hospital and CAH reporting requirements was unclear. To clarify, our proposal was that if a hospital could submit information on clinical quality measures sufficient to meet the requirements for Medicare that would also be sufficient for Medicaid. However, hospitals for which the Medicare measures did not reflect their patient populations could satisfy the Medicaid requirements by reporting the alternate Medicaid clinical quality measures. Reporting the alternate Medicaid measures would only qualify for the Medicaid program and would not qualify eligible hospitals as to the Medicare incentive program. In this final rule, this clarification is moot, however, because we removed the alternate Medicaid list of clinical quality measures listed in Table 21 (see 75 FR 1896 through 1900) of the proposed rule for eligible hospitals. This was based on the lack of electronic specifications for these measures available at the time of display of this final rule. Hospitals that report information on all 15 of the clinical quality measures, as applicable to their patient population, will qualify for both the Medicare and the Medicaid submission requirements for clinical quality measures. We recognize that many of the measures in the Medicare list would likely not apply to certain hospitals, such as children's hospitals. However, an eligible hospital would meet the clinical quality measure requirement by reporting values for the 15 clinical quality measures, including,

values of zero for the denominator, if accurate. Some value is required for each of the 15 clinical quality measures for eligible hospitals and CAHs. Therefore, for example, a children's hospital would enter zero for the denominator for any of the 15 measures for which they do not have any patients as described in the measure.

After consideration of public comments received, we are finalizing 15 clinical quality measures that eligible hospitals and CAHs will be required to report for Stage 1 (2011 and beginning 2012), as applicable to their patient population. Those 15 clinical quality measures for eligible hospitals and CAHs can be found in Table 10 of this final rule.

g. Potential Measures for EPs, Eligible Hospitals, and CAHs in Stage 2 and Subsequent Years

We stated our expectation that the number of clinical quality measures for which EPs, eligible hospitals, and CAHs would be able to electronically submit information would rapidly expand in 2013 and beyond.

We plan to consider measures from the 2010 PQRI program. These clinical quality measures can be found at *http://www.cms.hhs.gov/PQRI/05_StatuteRegulationsProgramInstructions.asp.* For future considerations of clinical quality measures for Stage 2 of meaningful use and beyond for eligible hospitals and CAHs, we also plan to consider other clinical quality measures from the RHQDAPU program which are identified in the FY 2010 IPPS final rule (75 FR 43868–43882). We invited comments on inclusion of clinical quality measures for the 2013 and beyond for the HITECH Act Medicare and Medicaid incentive program. We note that as with the other meaningful use objectives and measures, in the event that we have not promulgated clinical quality measures for the 2013 payment year, the measures for Stage 1 (beginning in 2011) would continue in effect.

For the Stage 2 of meaningful use, we indicated in the proposed rule that we are considering expanding the Medicaid EHR incentive program's clinical quality measure set for EPs and eligible hospitals to include clinical quality measures that address the following clinical areas, to address quality of care for additional patient populations, and facilitate alignment with Medicaid and CHIP programs:

- Additional pediatrics measures (such as completed growth charts, electronic prescriptions with weight-based dosing support and documentation of newborn screening).
- Long-term care measures.
- Additional obstetrics measures.
- Dental care/oral health measures.
- Additional behavioral/mental health and substance abuse measures.

The above list does not constitute a comprehensive list of all clinical quality measures that may be considered. We stated that specific measures for Stage 2 of meaningful use and beyond may be addressed by CMS in future notice and comment rulemaking. To assist us in identifying potential clinical quality measures for future consideration for Stage 2 of meaningful use and beyond, we solicited comments on the potential topics and/or clinical quality measures listed above as well as suggestions for additional clinical quality measure topics and/or specific clinical quality measures.

The following is a summary of comments received regarding the request for public comment on potential measures for EPs, eligible hospitals, and CAHs for Stage 2 of meaningful use and subsequent stages, and our responses.

Comment: A commenter suggested using newly adopted NQF Level 3 measures that incorporate common electronic administrative and clinical data that represent a better measure of the patient's condition. A commenter suggested adding long term care and post acute care measures in the next stage of meaningful use. A few commenters suggested future clinical quality measures be coordinated with Healthy People 2020. Another comment regarding measures included a request for medication measures that evaluate provider intervention. Other commenters indicated CMS should provide a more structured process for the adoption of clinical quality measures such that specialty EPs would have greater input into and ownership of the process. A commenter requested consideration that future clinical quality measures address both quality and resource use efficiency (for example potentially preventable Emergency Department visits and hospitalizations and inappropriate use of imaging MRI for acute low back pain). A commenter requested future clinical quality measures for the following areas: reduce hospital readmissions and to improve medication management, specifically safe and efficient management of heart disease, diabetes, asthma, mental health conditions and hospital procedures. A commenter requested clinical quality measures that will aid in increasing improved patient safety and reduce disparities. A commenter also recommended developing new clinical quality outcomes measures to address overuse and efficiency, care coordination, and patient safety. Some commenters requested the inclusion of HIV testing and reporting for preventive service quality measures. Some commenters stated that this would help to facilitate continued efforts to promote and implement the 2006 CDC Revised Recommendation on HIV testing, especially to non-HIV medical specialties. Some commenters recommended measure development in the areas of community mental health, home health, renal dialysis centers, long term care, post acute care, and nursing homes. A commenter recommended including 3 month treatment of pulmonary emboli (NQF 0593) and deep vein thrombosis (NQF 0434) for the next stage of meaningful use and beyond. A commenter requested including health disparity data in all clinical quality measure analyses. Some commenters also recommended future clinical quality measure development in the following areas: Diabetes, heart disease, asthma, disease screening, chronic disease management, patient safety, nursing sensitive measures, atrial fibrillation, and ethnic disparities. Commenters requested expanding pediatric measures to provide expanded focus on childhood diseases that require hospitalization such as asthma, developmental issues and weight-based medication dosage safety issues. Additional commenters requested measures for blood test for lead levels for children up to 1 year of age and between 1 and 2 years of age, co-morbid conditions and dental utilization. A commenter recommended that only one EP should be accountable for the quality intervention and clinical quality measure such as NQF 0323 Title: End Stage Renal Disease (ESRD): Plan of Care for Inadequate Hemodialysis in ESRD Patient. The commenter indicated that this type of measure could involve more than one provider, for example, nephrologist and a dialysis facility. Because provider clinical practices may vary, practice variations may independently influence patient outcomes. Some commenters suggested future development of measures foster greater use of the clinical information available in EHRs to improve clinical processes and evaluate patient outcomes and suggested use of outcomes measures instead of process measures. Furthermore, commenters support the inclusion of outcomes measures rather than process measures and composite versus individual measures. Several commenters indicated support for the preventive care measures included in

the proposed rule and suggested expanding the set of preventive care measures to include HIV and STD screening and eye care specialty measures. A commenter requested CMS provide information about their strategic plan for future Medicare clinical quality measurement selection, how they will improve care delivery, proposed stages of reporting, goals and metrics.

Response: We are appreciative of the many suggestions and acknowledge the breadth of interest in certified EHR technology being the vehicle for clinical quality measures reporting. We expect to consider these suggestions for future measure selection in the Medicare and Medicaid EHR incentive payment programs.

Comment: We received various comments pertaining to future clinical quality measures applicable principally to the Medicaid population. One commenter urged CMS to include clinical quality measures specific to newborn screening in Stage 1 of meaningful use for pediatric providers.

Response: We agree that newborn screening, both as a clinical quality measure, and from a data standards perspective, is a prime candidate for inclusion in the Stage 2 definition of meaningful use. We affirm our proposed statement about our commitment to work with the measure development community to fill noted gaps. We are appreciative of the many suggestions. We expect to consider these suggestions for immunizations, prenatal screening, infectious disease, etc. in measure selection in future rulemaking.

Comment: A commenter indicated CMS should make explicit the health goals and targets for the HITECH Act investments that are already implied by the proposed clinical measures. Making them explicit allows CMS to set national targets.

Response: In general, the goal with respect to clinical quality measures is to improve healthcare quality as measured by the clinical quality measures. We believe that specific quantitative targets are impractical at this stage given lack of established base level notes and no prior clinical quality measure reporting via certified EHR technology.

Comment: Several commenters asked how CMS plans to develop further measure specifications for clinical quality measures. Another commenter asked for an electronic source for ICD–9 and CPT codes defining the specific conditions or diagnoses or treatments in order to maintain an up-to-date capability.

Response: For many clinical quality measures, clearly defined electronic specifications are not yet available. In general, CMS relies on the measures' stewards to both develop measures and to provide the specifications. Nevertheless, we recognize that many existing measures, some of which are owned and maintained by us or its contractors, do not currently have electronic specifications. We are aware of work currently taking place to fill this gap. We expect to actively work in a collaborative way with measures developers and stewards to help assure the development of electronic specifications for clinical quality measures, but we also expect to engage a contractor to perform work developing electronic specifications which may or may not involve measure developers and stewards. As for CPT codes, these are copyrighted by and are available from the American Medical Association. The National Center for Health Statistics (NCHS) and CMS are the U.S. governmental agencies responsible for overseeing all changes and modifications to the ICD–9 codes.

Comment: Some commenters suggested specific new clinical quality measures which are listed below in Table 11. Several commenters suggested new or revised clinical quality measures or the use of existing measures from other programs.

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Table 11: EP Proposed New Clinical Quality Measures

Measure Number	Clinical Quality Measure Title and/or Description
PQRI 27	Diabetes Mellitus: Diabetic foot and ankle care, ulcer prevention evaluation of footwear; preventive care and screening
PQRI 30	Timely administration of prophylactic parenteral antibiotics
PQRI 76	Prevention of catheter related bloodstream infections CBSI
PQRI 124	HIT: Adoption/use of medical records
PQRI 126	Diabetes Mellitus: Diabetic foot and ankle care, peripheral neuropathy neurological evaluation
PQRI 128	BMI Screening and follow-up
PQRI 130	Documentation and Verification of Current Medications in the Medical Record
PQRI 131	Pain Assessment Prior to Initiation of Patient Treatment
PQRI 148	Back Pain: Initial Visit
PQRI 149	Back Pain: Physical Exam
PQRI 150	Back Pain: Advice for Normal Activities
PQRI 151	Back Pain: Advice Against Bed Rest
PQRI 154	Falls: Plan of care
PQRI 155	Falls: Risk Assessment
PQRI 159	HIV/AIDS: CD4 + Cell Count or CD4 + Percentage
PQRI 160	HIV/AIDS: Pneumocystis jirovecii Pneumonia Prophylaxis
PQRI 161	HIV/AIDS: Adolescent and Adult Patients with HIV/AUDS who are Prescribed Potent Antiretroviral Therapy
PQRI 162	HIV/AIDS: HIV RNA Control After 6 Months of Potent Antiretroviral Therapy
PQRI 193	Perioperative temperature management
PQRI 205	HIV/AIDS: STDs, Chlamydia and Gonorrhea Screenings
PQRI 206	HIV/AIDS: Screening for High Risk Sexual Behaviors
PQRI 207	HIV/AIDS: Screening for Injection Drug Use
PQRI 208	HIV/AIDS: STDs Syphilis Screening
NQF 0021	Therapeutic Monitoring: Annual monitoring for patients on persistent medications
NQF 0039	Flu Shots for Adults Ages 50-64

Measure Number	Clinical Quality Measure Title and/or Description
NQF 0058	Inappropriate antibiotic treatment for adults with acute bronchitis
NQF 0071	Acute Myocardial Infarction: Persistence of Beta-Blocker Treatment After a Heart Attack
NQF 0082	Heart Failure: Patient Education
NQF 0111	Bipolar Disorder: Appraisal for risk of suicide
NQF 0116	CABG: Anti-Platelet Medication at Discharge
NQF 0117	CABG: Beta Blockage at Discharge
NQF 0118	CABG: Anti-Lipid Treatment at Discharge
NQF 0278	Low Birth Weight
NQF 0477	Rate of Very Low Birth Weight Deliveries
NQF 0309	LBP: Appropriate Use of Epidural Steroid Injections
NQF 0602	Migraine: Adults with frequent use of acute medications that also received prophylactic medications
NQF 0613	MI: Use of beta blocker therapy
NQF 0632	Primary prevention of cardiovascular events in diabetics (older than 40 yrs): Use of Aspirin or Antiplatelet Therapy
NQF EC-20-08	Warfarin – INR Monitoring
NQF EC-203-08	Hyperlipidemia (Primary Prevention) – Lifestyle changes and/or lipid lowering therapy
NQF EC-227-08	High Risk for Pneumococcal Disease – Pneumococcal vaccination.
NQF EC-231-08	Diabetes with LDL greater than 100 – Use of lipid lowering agent
NQF EC-232-08	Diabetes with Hypertension or Proteinuria – Use of an ACE Inhibitor or ARB.
NQF EC-238-08	Non-diabetic Nephropathy
NQF EC-252-08	Chronic Kidney Disease with LDL greater than 130
NQF EC-256-08	Male Smokers or Family History of AAA Screening for AAA
NQF EC-262-08	Diabetes and elevated HbA1c – Use of diabetes medications
NQF EC-272-08	Secondary Prevention of Cardiovascular Events – Use of Aspirin or anti-platelet therapy
NQF EC-274-08	Primary prevention of cardiovascular events in diabetics older than 40 yrs – Use of aspirin or anti platelet therapy
NQF EC-281-08	Osteopenia and Chronic Steroid Use – Treatment to prevent Osteoporosis

Measure Number	Clinical Quality Measure Title and/or Description
NQF EC-285-08	Chronic Liver Disease – Hepatitis A vaccination
NQF EC-288-08	Atherosclerotic Disease and LDL greater than 100-use of a Lipid Lowering Agent
N/A	Family Planning - Percent of sexually active clients at risk for unintended pregnancy – screened at least once annually for use of contraceptive method at last intercourse.
N/A	Percent of patients for which EP retrieves and acts on prescription refill data obtained through the e-Rx system
N/A	Percent of patients for which a generic drug has been prescribed
N/A	Provider follow-up on growth chart information where clinically indicated
N/A	Inappropriate Use of Antibiotics in Bronchitis
N/A	Chronic Disease Self Management Goal: Percent of Asthmatics, Diabetics, Diagnosed Hypertension, or Other CVD-Related Illness with a Self-Management Goal/Readiness Plan (4 possible measures)
N/A	Good glycemic control: A1C < 7
N/A	Elective Preterm Induction Rate
N/A	Diabetes Mellitus A1C Frequency: Percent of patients with Diabetes Mellitus with two A1C measures in most recent 12 month period
N/A	Pediatric Type I Diabetes Mellitus Diabetic Retinopathy
NA	Performing a complete lipid panel to assess CVD risk
N/A	Adolescent Preventive Care
N/A	Child Preventive Care
N/A	Preventive Screening Lipid Disorders: Percent of male patients over age 35 who have been screened for lipid disorders, percent of females over age 45 screened if they have risk factors for CAD
N/A	Preventive Care & Screening: Screening for Diabetes
N/A	Cervical Cancer Prevention: Percent of female patients age 9-26 yrs who received three doses of HPV vaccine

Measure Number	Clinical Quality Measure Title and/or Description
N/A	Asthma Action Plan: Percent of asthma patients with a documented asthma action plan that has been developed or updated within the past 6 months.
N/A	Asthma Assessment of Percent of asthma patients who have a documented level of control at last asthma visit
N/A	Asthma Assessment/Spirometry -Percent of asthma patients ages 5 and older who received spirometry in the past 12 months.
N/A	Asthma Assessment of Severity: Percent of Patients who have a Documented Level of Asthma Severity for the Last Asthma Visit

Response: Many of the proposed clinical quality measures are in the existing PQRI program or are NQF endorsed. Others are not. We are appreciative of these many specific suggestions and will retain the comments for future consideration. Prior to including measures in the Medicare EHR incentive payment program, as required by the HITECH Act, we will publish the measures in the **Federal Register** and provide an opportunity for public comment. We will examine all options for soliciting public comment on future Medicaid-specific clinical quality measures, as the **Federal Register** notice requirement does not apply to the Medicaid EHR incentive program.

Comment: Some commenters suggested the following new topics for clinical quality measure development for our program:

Table 12: EP Proposed New Topics

Measure Number	Proposed Clinical Quality Measure Topics
N/A	Measures dealing with overuse e.g, antibiotics and epidural injections and unwarranted procedures-spine surgery, PTCA, hysterectomy, CT, polypharmacy
N/A	History regarding new or changing moles
N/A	Counseling on monthly skin self exam
N/A	Melanoma patients entered into recall system
N/A	Newborn Screening
N/A	Preventing Eye Disease
N/A	Epilepsy
N/A	Health Disparities
N/A	Long Term Care
N/A	Mental Health
N/A	Substance Abuse
N/A	School Health Services for Children
N/A	Newborn Hearing and Bloodspot Screening
N/A	Children at Risk for Developmental Disabilities
N/A	Children with Chronic Disabling Conditions
N/A	Child Health-Related Quality of Life
N/A	Child Specific Health Outcomes
N/A	Lead Poisoning Screening for Children
N/A	Hepatitis A (childhood immunization)
N/A	Hepatitis B and hepatitis immune globulin (for newborns of mothers with chronic hepatitis)
N/A	Functional Status
N/A	Use of epidural injections
N/A	Healthy Weight/Reduction in Obesity
N/A	Population-level lipid test results
N/A	Population-level Blood pressure results
N/A	Population-level Aspirin therapy
N/A	Pharmacologic Prescription for Tobacco Cessation
N/A	Alcohol/Drug Misuse
N/A	Family History for Chronic Diseases Sexually activity status (13+) to trigger screening for STDs
N/A	Screening pregnant women for STDs
N/A	Screening for infectious disease risk factors
N/A	Vaccine Reminders
N/A	STD HIV Screening
N/A	Central Line Placement-Related Pneumothorax for Pediatric Population
N/A	Acute Otitis Externa-Topical Therapy, Pain assessment, and systemic antimicrobial therapy

Measure Number	Proposed Clinical Quality Measure Topics
N/A	Otitis media with effusion (OME)- diagnostic evaluation of tympanic membrane mobility
N/A	NQF Care Coordination Measures
N/A	Additional new pediatric measures
N/A	Radiation dose
N/A	Dental measures/Oral Health
N/A	HRSA Clinical Measures for Health Center Grantee Performance Reviews
N/A	Patient centered quality measures
N/A	Outcomes Measures
N/A	Outpatient Measure core set (NQA/AQA/HQA)
N/A	Nutrition-related measures
N/A	Efficiency Measures
N/A	Patient Engagement Measures
N/A	Decision Support Measures
N/A	New Radiation Oncology measures
N/A	Tobacco Use Assessment
N/A	Tobacco Use Treatment
N/A	Tobacco Use Treatment at Discharge
N/A	Tobacco Use Follow-up
N/A	Preventive Screening: Tobacco Use
N/A	Preventive Screening: Falls in Older Adults
N/A	Preventive Counseling: Breastfeeding
N/A	Preventive Counseling: Use of Folic Acid
N/A	HRSA/BPHC Measures
75, 610, 120, 355, 560, 79, 684, 132, 566, 356	CDS alert responses
N/A	Population health measures
N/A	Identifying patients with paroxysmal atrial fibrillation
N/A	Group practice measures
N/A	Genetic Measures
N/A	Ear, nose, throat measures
N/A	Home health
N/A	ESRD Center measures
N/A	Adherence related measures by therapeutic class
N/A	Medication dosing for certain disease states such as diabetes
N/A	Suboptimal treatment regimens for chronic disease such as diabetes and asthma
N/A	Absence of control therapy in persistent asthma patients
N/A	HEDIS high risk medication use in the elderly measures
N/A	TB Screening
N/A	Patient self report satisfaction

Measure Number	Proposed Clinical Quality Measure Topics
N/A	Prescribing and monitoring of psychotropic medications for children and adolescents with psychiatric illness
N/A	Measure for treatment of ADD and other mood disorders
N/A	Measure immunizations for adolescents including TDaP, HPV, and meningococcal.
N/A	Hepatitis B/immune globulin to newborns to mothers who have chronic hepatitis B infection as recommended by CDC
N/A	Underutilization of medication measures
N/A	Improve active engagement of patients in their care
N/A	Improved care coordination and reduce gaps in care

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Response: We appreciate the suggested measure topics submitted by commenters for potential new clinical quality measures. Any future clinical quality measures developed will be in consideration of the clinical practices particular to EPs and eligible hospitals. We have captured these recommendations and will have them available for consideration in future years.

h. Reporting Method for Clinical Quality Measures for 2011 and Beginning With the 2012 Payment Year

(1) Reporting Method for 2011 Payment Year

As we previously discussed, we proposed to use attestation as a means for EPs, eligible hospitals and CAHs, for purposes of the Medicare incentive program, to demonstrate the meaningful use requirement for the calculation and submission of clinical quality measure results to CMS.

Specifically, for 2011, we proposed to require that Medicare EPs and hospitals attest to the use of certified EHR technology to capture the data elements and calculate the results for the applicable clinical quality measures. State Medicaid HIT Plans submitted to CMS will address how States will verify use of certified EHR technology to capture and calculate clinical quality measures by Medicaid EPs and eligible hospitals.

Further, we proposed to require that Medicare EPs, eligible hospitals, and CAHs attest to the accuracy and completeness of the numerators, denominators, and exclusions submitted for each of the applicable measures, and report the results to CMS for all applicable patients. We expect that States will follow a similar strategy as Medicare for the Medicaid EHR incentive program.

We proposed that attestation will utilize the same system for other attestation for meaningful use objectives, and proposed we would require for Medicare EPs that they attest to the following:

- The information submitted with respect to clinical quality measures was generated as output of an identified certified EHR technology.
- The information submitted is accurate to the best of the knowledge and belief of the EP.
- The information submitted includes information on all patients to whom the clinical quality measure applies.
- The NPI and TIN of the EP submitting the information, and the specialty group of clinical quality measures that are being submitted.
- For an EP who is exempt from reporting each of the core measures, an attestation that one or more of the core measures do not apply to the scope of practice of the EP.
- For an EP who is exempt from reporting on a specialty group, an attestation that none of the specialty groups applies to the scope of practice of the EP.
- For an EP who does report on a specialty group, but is exempt from reporting on each of the clinical quality measures in the group, an attestation that the clinical quality measures not reported do not apply to any patients treated by the EP.
- The numerators, denominators, and exclusions for each clinical quality measure result reported, providing separate information for each clinical quality measure including the numerators, denominators, and exclusions for all patients irrespective of third party payer or lack thereof; for Medicare FFS patients; for Medicare Advantage patients; and for Medicaid patients.
- The beginning and end dates for which the numerators, denominators, and exclusions apply.

Again, State Medicaid Agencies will determine the required elements for provider attestations for clinical quality measure reporting, subject to CMS prior approval via the State Medicaid HIT Plan.

For eligible hospitals, we proposed to require that they attest to the following:

- The information submitted with respect to clinical quality measures was generated as output from an identified certified EHR technology.
- The information submitted to the knowledge and belief of the official submitting on behalf of the eligible hospital.
- The information submitted includes information on all patients to whom the measure applies.
- The identifying information for the eligible hospital.
- For eligible hospitals that do not report one or more measures an attestation that the clinical quality measures not reported do not apply to any patients treated by the eligible hospital during the reporting period.
- The numerators, denominators, and exclusions for each clinical quality measure result reported, providing separate information for each clinical quality measure including the numerators, denominators, and exclusions for all patients irrespective of third party payer or lack thereof; for Medicare FFS patients; for Medicare Advantage patients; and for Medicaid patients.
- The beginning and end dates for which the numerators, denominators, and exclusions apply.

The following is a summary of comments received regarding the proposed reporting method for clinical quality measures for the 2011 payment year, and our responses.

Comment: The majority of commenters were against requiring attestation for 2011, rather than suggesting modification of the specific attestation requirements. Others commented that reporting should not be delayed to realize quality improvements

and better health outcomes for patients as soon as possible. Many commenters suggested deferral of clinical quality measures submission until CMS can electronically accept data. Commenters indicated that this is consistent with allowing delayed reporting by Medicaid providers until 2012 or beyond. A number of commenters suggested that attestation should be confined to attesting that the EP's had reviewed or selected relevant clinical quality measures.

Response: While we received many comments to delay attestation past 2011, we are finalizing our proposed requirement for EPs and eligible hospitals to attest to the numerators, denominators, and exclusions in their first payment year for the required clinical quality measures as described in section II.A.3.d through f of this final rule. Medicaid providers do not have "delayed reporting of clinical quality measures." The statute and this final rule allow Medicaid providers the option of receiving the EHR Incentive Payment for having adopted, implemented or upgraded to certified EHR technology, in lieu of meeting the meaningful use bar in their first participation year. We expect that most Medicaid providers would choose to adopt, implement or upgrade to certified EHR technology, rather than demonstrating they are meaningful EHR users in their first participation year.

Comment: Some commenters also suggested EPs should only have to attest that the EP is entering the required data elements for clinical quality measure reporting where those fields exist in the certified EHR technology and provide feedback to the vendor where structured data fields are not available. Other commenters indicated the burden of adding numerous new data elements is high and labor intensive.

Response: We considered the suggestion of only requiring attestation of documentation of clinical encounters. While we agree that this could be considered "information on clinical quality measures," however, we do not believe that such information is needed when including the submission of information on clinical quality measures, which is a required element of meaningful use. We also believe that submission of such information would be of limited value. We believe that by limiting the clinical quality measure submission requirement to those results calculated by certified EHR technology, we have limited the potential burden.

After consideration of the public comments received, we are requiring EPs, eligible hospitals, and CAHs to attest to the numerator, denominator, and exclusions for the payment year 2011 at § 495.8. We are finalizing the following requirements for EPs in this final rule for reporting clinical quality measures:

- The information submitted with respect to clinical quality measures was generated as output of an identified certified electronic health record.
- The information submitted is accurate to the best of the knowledge and belief of the EP.
- The information submitted includes information on all patients to whom the clinical quality measure applies for all patients included in the certified EHR technology.
- The NPI and TIN of the EP submitting the information at § 495.10.
- The numerators, denominators, and exclusions for each clinical quality measure result reported, providing separate information for each clinical quality measure including the numerators, denominators, and exclusions for all applicable patients contained in the certified EHR technology irrespective of third party payer or lack thereof.
- The beginning and end dates for which the numerators, denominators, and exclusions apply (the Medicare EHR reporting period in payment year 1 is 90 days as stated at § 495.4, and for payment year 2 is the beginning and end date of the reporting period as stated at § 495.4. For Medicaid providers, as there is no EHR reporting period for adopting, implementing or upgrading for their first payment year, it is in their second payment year/first year of demonstrating meaningful use that they have a 90-day EHR reporting period. Therefore, it is their 2nd year of demonstrating meaningful use that has a 12 month EHR reporting period. For eligible hospitals and CAHs, we are finalizing the following requirements in this final rule:
- The information submitted with respect to clinical quality measures was generated as output from an identified certified EHR technology.
- The information submitted is accurate to the best of the knowledge and belief of the official submitting on behalf of the eligible hospital or CAHs.
- The information submitted includes information on all patients to whom the measure applies for all patients included in the certified EHR technology.
- The identifying information for the eligible hospital and CAH at § 495.10.
- The numerators, denominators, and exclusions for each clinical quality measure result reported, providing separate information for each clinical quality measure including the numerators, denominators, and exclusions for all applicable patients contained in the certified EHR technology irrespective of third party payer or lack thereof.
- The beginning and end dates for which the numerators, denominators, and exclusions apply (the Medicare EHR reporting period in payment year 1 is 90 days as stated at § 495.4, and for payment year 2 is the beginning and end date of the reporting period as stated at § 495.4. For Medicaid providers, as there is no EHR reporting period for adopting, implementing or upgrading for their first payment year, it is in their second payment year/first year of demonstrating meaningful use that they have a 90-day EHR reporting period. Therefore, it is their 2nd year of demonstrating meaningful use that has a 12 month EHR reporting period.

States must implement the same meaningful use requirements, including clinical quality measures, with the exceptions described in section II.A. of this final rule. Therefore, Medicaid EPs and eligible hospitals must submit the same required information described above for clinical quality measures. States will propose in their State Medicaid HIT Plans how they will accept provider attestations in the first year they implement their Medicaid EHR incentive program, and how they will accept electronic reporting of clinical quality measures from providers' certified EHR technology in their second and subsequent implementation years.

(2) Reporting Method Beginning in 2012

In our proposed rule, we proposed that for the 2012 payment year, the reporting method for clinical quality measures would be the electronic submission to CMS of summary information, (that is, information that is not personally identifiable) on the clinical quality measures selected by the Secretary using certified EHR technology. For Medicaid, we proposed that EPs and hospitals eligible only for the Medicaid EHR incentive program must report their clinical quality measures data to States. We proposed that States would propose to CMS how they plan to accept and validate Medicaid providers' clinical quality measures data in their State Medicaid HIT Plans, subject to CMS review and approval.

As we did for payment year 2011, for 2012, we also proposed reporting on all cases to which a clinical quality measures applies in order to accurately assess the quality of care rendered by the particular EP, eligible hospital, or CAH generally. Otherwise it would only

be possible to evaluate the care being rendered for a portion of patients and lessen the ability to improve quality generally. We solicited comments on the impact of requiring the submission of clinical quality measures data on all patients, not just Medicare and Medicaid beneficiaries.

The following is a summary of comments received regarding the proposed reporting method beginning in 2012 in regard to the collection of aggregate level data on all patients.

Comment: Several commenters noted that it appears that EPs are supposed to submit clinical quality measures electronically to the States in 2012. The commenters noted that several States have aging Medicaid Management Information Systems that may not be capable of accepting this data/information. The commenters requested clarification about whether CMS expects the States to utilize and report this data immediately.

Response: To clarify, States may propose to CMS in their State Medicaid HIT Plans (See Section 495.332) the means by which they want to receive providers' clinical quality measures, starting with States' second implementation year of their Medicaid EHR incentive program. States are not obliged to receive this data using their MMIS but can consider other options such as but not limited to: An external data warehouse, registries or health information exchanges that include data repositories.

Comment: A commenter asked that we state the authority which provides us the ability to require EPs and hospitals to report on non-Medicare and Medicaid patients.

Response: Sections 1848(o)(A)(2)(iii) and 1886(n)(3)(A)(iii) of the Act broadly state that as a condition of demonstrating meaningful use of certified EHR technology, an EP, CAH or eligible hospital must "submit information" for the EHR reporting period on the clinical quality or other measures selected by the Secretary "in a form and manner specified by the Secretary." Likewise, section 1903(t)(6) of the Act states that demonstrating meaningful use may include clinical quality reporting to the States, and may be based upon the methodologies that are used in sections 1848(o) and 1886(n). This language does not limit us to collecting only that information pertaining to Medicare and Medicaid beneficiaries. Therefore, we believe that we have the authority to collect summarized clinical quality measures selected by the Secretary, with respect to all patients to whom the clinical quality measure applies, treated by the EP, eligible hospital, or CAH. We believe that the quality of care of our EP, eligible hospitals, and CAHs, as well as the ability to demonstrate the meaningful use of certified EHR technology, is best reflected by the care rendered to all patients, not just Medicare or Medicaid beneficiaries.

Comment: Some commenters recommended patient level data for clinical quality measure reporting while others supported CMS' requirement to submit summary level data for EPs and hospitals. There were several commenters that indicated support for reporting clinical quality measure data on all patients rather than just on Medicare and Medicaid patients. Another commenter stated that CMS should not require hospitals to submit patient level data and that the data should be at the aggregated level for all payment years. Another commenter stated that it is well proven in other disciplines that aggregated clinical data on quality measures can drive improvements in outcomes. Another commenter recommended patient level data that would be useful to State health programs and link information to managed care organizations.

Response: We agree with the commenters that stated that reporting clinical quality measure data for all patients provides a more comprehensive measure of quality. We acknowledge that there are potential advantages to patient level data in measuring quality such as those stated by the commenter. However, for Stage 1 we have elected to require aggregate level data since the EHR standards as adopted by ONC's final rule (found elsewhere in this issue of the **Federal Register**) do not provide standards for the submission of patient level data.

Comment: The commenter requested that CMS should have a process in place to support end-users with on-going help desk support.

Response: We agree with the suggestion for the implementation of a help desk to respond to questions related to the various CMS related questions after implementation of the proposed rule. Information about how we will provide assistance to providers will occur outside this final rule.

Comment: A few commenters asked for clarification regarding the Stage 1 audit process to ensure accuracy for the reporting of clinical quality measures (for example, numerator, denominator, and exception data).

Response: EPs, eligible hospitals, and CAHs are required for 2011 to attest to results as automatically calculated by certified EHR technology. Beginning with 2012, such information will be submitted electronically with respect to these requirements; we expect our audit strategy would be based on verifying that the results submitted accord with how they were calculated by the certified EHR technology.

Comment: We received comments requesting that CMS require that eligible providers report their clinical quality measures data to not only States and CMS, but also to Regional Health Improvement Collaboratives, where such programs exist. The commenters believed that this represents an alternative means for data submission rather than attestation and would allow States and CMS to test this alternative in 2011 or 2012. A commenter requested that CMS interpret the statutory requirement (Sections 1848(o)(2)(B)(iii) and 1886(n)(3)(B)(iii)) to avoid redundant or duplicative reporting of quality measures to include not just other CMS reporting efforts but also to avoid duplicative and redundant reporting with State and/or regional quality measurement and reporting efforts. They therefore requested that for Medicaid, CMS require EPs and hospitals report their clinical quality measures to not only States/CMS but also to Regional Health Improvement Collaboratives, where such programs exist.

Response: Clinical quality measures need to be reported to CMS for the Medicare program. For 2011, we intend to provide a web based tool for attestation. Beginning with 2012 for Medicare, we will provide one or more alternative options for electronic submission which may include intermediaries. For Medicaid, information will go to the States as directed by the States. We believe it would go well beyond the purview of this provision to require additional reporting other than to CMS or the States. To clarify the issue raised by the commenter, sections 1848(o)(2)(B)(iii) and 1886(n)(3)(B)(iii) are tied to the Secretary and Federally-required quality measures reporting programs. However, CMS agrees that State and regional redundancies could be very problematic. We therefore clarify our proposed policy. States must include in their State Medicaid HIT Plans an environmental scan of existing HIT and quality measure reporting activities related to Medicaid. We expect States to include details in their SMHP about how these other on-going efforts can be leveraged and supported under HITECH; and how HITECH will not result in duplicative and/or burdensome reporting requirements on the same providers or organizations.

In the proposed rule, we proposed that Medicare EPs, eligible hospitals, and CAHs would be required to report the required clinical quality measures information electronically using certified EHR technology via one of three methods. The primary method we proposed would require the EP, eligible hospital, or CAH to log into a CMS-designated portal. Once the EP, eligible hospital, or CAH has logged into the portal, they would be required to submit, through an upload process, data payload based on specified structures, such as Clinical Data Architecture (CDA), and accompanying templates produced as output from their certified EHR technology.

As an alternative to this data submission method, we proposed to permit Medicare EPs, eligible hospitals, and CAHs to submit the required clinical quality measures data using certified EHR technology through Health Information Exchange (HIE)/ Health Information Organization (HIO). This alternative data submission method would be dependent on the Secretary's ability to collect data through a HIE/HIO network and would require the EP, eligible hospital, or CAH who chooses to submit data via an HIE/ HIO network to be a participating member of the HIE/HIO network. Medicare EPs, eligible hospitals, and CAHs would be required to submit their data payload based on specified structures or profiles, such as Clinical Data Architecture (CDA), and accompanying templates. The EPs, eligible hospitals, or CAHs data payload would be an output from their respective certified EHR technologies, in the form and manner specified from their HIE/HIO adopted architecture into the CMS HIE/HIO adopted architecture.

As another potential alternative, we proposed to accept submission through registries dependent upon the development of the necessary capacity and infrastructure to do so using certified EHRs.

We stated in the proposed rule that we intended to post the technical requirements for portal submission and the alternative HIE/HIO submission, the HIE/HIO participating member definition, and other specifications for submission on our Web site for Medicare EPs on or before July 1, 2011 and for Medicare eligible hospitals and CAHs on or before April 1, 2011 for EHR adoption and incorporation and to accommodate EHR vendors.

The following is a summary of comments received regarding the proposed reporting method for clinical quality measures beginning with the 2012 payment year, and our responses.

Comment: A commenter recommended that CMS test a range of reporting options for clinical quality measures to establish uniform and reliable rates of data transmission. Several commenters supported the three data submission methodologies listed in the proposed rule to allow flexibility in the quality reporting mechanisms. Many commenters requested reporting via registries.

Response: We agree with the desirability of considering the three transmission methodologies listed in the proposed rule. The submission through a portal is the only mechanism that is feasible and practical for 2012 electronic clinical quality measure submission. We plan to test HIE/HIO and registry submission for future possible implementation through HITECH.

Comment: A commenter requested clarification as to when CMS would no longer accept data for 2012 for Medicare EPs.

Response: The specific technical mechanism for attestation and electronic submission will be posted on the CMS Web site, and through various educational products in development. We anticipate that the last date for attestation or electronic submission will be two-three months after the close of the applicable EHR reporting period for EPs, eligible hospitals, and CAHs respectively.

Comment: Several commenters requested that CMS continue programs that incentivize advanced patient care for providers who are not eligible for the EHR incentive program and/or who do not become meaningful users of certified EHR technology.

Response: CMS clarifies, based upon the comments, that our efforts to avoid duplicative quality reporting requirements do not necessarily mean the discontinuation of other quality reporting programs. CMS and State Medicaid agencies support several quality reporting programs that are legislatively mandated or approach quality measurement in ways that are not exclusively tied to HIT, or that, are voluntary and/or address emerging or developing quality measure focus areas. We are committed to determining where the EHR incentive program's quality measure reporting can support other quality objectives, where it cannot and how to best align our overall quality measurement efforts across programs.

Comment: Many commenters requested deferring quality measure reporting until 2012 and/or 2013, at which time all measures will be electronically specified and tested. Commenters believed that this was especially important for new clinical quality measures such as Emergency Department Throughput and Stroke, and recommended gradually phasing in or gradually increasing the number of reportable measures and measure sets over time to allow for sufficient testing and harmonization between programs. Some commenters suggested that for Stage 1, eligible hospitals should be required to report only on the 15 measures that have been electronically specified and those that are appropriate for that organization. One commenter requested clinical quality measure reporting should be optional. Also, commenters requested for 2011 and 2012 that hospitals continue to report clinical quality measures through the current pay-for-reporting (RHQDAPU and HOP QDRP) programs or on clinical quality measures that coincide with HEDIS reporting measures including HOS and CAHPS, using the existing approaches, while quality measurement specialists and vendors create valid, reliable, and field-tested e-measures for deployment in the eligible hospitals for 2013. Finally, commenters stated that the proposed timeline may negatively impact credibility of data produced and have potentially negative impact on patient safety.

Response: With respect to comments received regarding the timeline for implementation of the EHR incentive program, we are only finalizing clinical quality measures that are electronically specified by the date of display of this final rule. For eligible hospitals and CAHs, we are finalizing 15 clinical quality measures as listed in Table 10 of this final rule that will be required to report for 2011 and 2012, as applicable to their patient population. Although we understand the suggestion that reporting through RHQDAPU should suffice for the HITECH Act, the difficulty is that HITECH specifically requires that EPs, eligible hospitals, and CAHs use "certified EHR technology" in connection with the submission of clinical quality measures. Thus the HITECH Act introduces a requirement that at least some clinical quality measures be submitted in connection with the use of certified EHR technology, whereas RHQDAPU has no such requirement. We have limited the measures to those that have been electronically specified and that are able to be automatically calculated by the certified EHR technology. These results will be reported by EPs, eligible hospitals, and CAHs. We will seek to align the EHR incentive program and quality reporting programs in future rulemaking.

Comment: A number of commenters urged CMS not to require submission of

clinical quality measures data beyond what a certified EHR can produce. Specifically, commenters stated that no clinical quality measures required for submission in Stage 1 should require a manual chart review. Some commenters also requested allowing submission of clinical quality measures through other EHRs that are not certified.

Response: We have adopted the suggested approach for 2011 and 2012 that limits the required information on clinical quality measures results to that which can be automatically calculated by the certified EHR technology. As to non-certified EHR technology, the HITECH Act incentive program specifically requires the meaningful use of certified EHR technology.

Comment: Several commenters stated that currently the data required to be used in the calculation of clinical quality measures are obtained from EHR discrete fields, free text and paper records. Commenters recommended a uniform reporting structure. Commenters questioned if they would be submitting raw data, numerators and denominators only, if there will be an intermediary file that will allow manual edits to the file prior to submission, and if not will validity be based entirely on discrete electronic data. Commenters asked if sampling will be permitted or if hospitals will be required to report on entire populations. Commenters supported the value of reporting clinical quality measures for all patients, not just Medicare and Medicaid patients, in order to see the whole picture of the patient population which will enhance quality improvement.

Response: As discussed elsewhere, the submission requirement is limited to calculated results of clinical quality measures from certified EHR technology, as specified in this final rule, and as is consistent with the ONC final rule (*see* 75 FR 2014) which requires certified EHR technology to be able to calculate clinical quality measures as specified by CMS.

Comment: Several commenters suggested the clinical quality measures requiring medication administration data be delayed for reporting because they require advanced features of EHR systems with implementation of the features, in particular Electronic Medication Administration Record (eMAR).

Response: The Department has adopted certification criteria for EHR Modules and Complete EHRs, as identified in the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology; Interim Final Rule (75 FR 2014). It has also proposed temporary and permanent certification programs for testing and certifying health information technology in a March 10, 2010 proposed rule (75 FR 11328). The certification of EHRs will assure functionality of the information system to obtain clinical quality data from the EHR.

After consideration of the public comments received, starting in payment year 2012, in addition to meeting requirements for measures on meaningful EHR use and other requirements, Medicare EPs, eligible hospitals, and CAHs will be required to electronically submit clinical quality measures results (numerators, denominators, exclusions) as calculated by certified EHR technology at § 495.8. Medicaid EPs will be required to do so in the State's second implementation year for their Medicaid EHR incentive program. The clinical quality measures will be for all patients, regardless of payer, and will be for the period of the EHR reporting period. Medicare EPs, eligible hospitals, and CAHs will be required to report the required clinical quality measures information electronically using certified EHR technology via one of three methods. The primary method will require the EP, eligible hospital, or CAH to log into a CMS-designated portal. Once the EP, eligible hospital, or CAH has logged into the portal, they will be required to submit, through an upload process, data payload based on specified structures, such as Clinical Data Architecture (CDA), and accompanying templates produced as output from their certified EHR technology.

As an alternative to this data submission method, contingent on feasibility, we will permit Medicare EPs, eligible hospitals, and CAHs to submit the required clinical quality measures data using certified EHR technology through a Health Information Exchange (HIE)/Health Information Organization (HIO). This alternative data submission method will be dependent on the Secretary's ability to collect data through a HIE/HIO network and would require the EP, eligible hospital, or CAH who chooses to submit data via an HIE/HIO network to be a participating member of the HIE/HIO network. Medicare EPs, eligible hospitals, and CAHs would be required to submit their data payload based on specified structures or profiles. The EPs, eligible hospitals, or CAHs data payload should be an output from their respective certified EHR technologies, in the form and manner specified from their HIE/HIO adopted architecture into the CMS HIE/HIO adopted architecture.

As another alternative, we will also accept submission through registries dependent upon the development of the necessary capacity and infrastructure to do so using certified EHRs. Finally, qualifying Medicare Advantage organizations for their eligible Medicare Advantage EPs, as well as, Medicare Advantage-affiliated eligible hospitals and CAHs will continue to submit HEDIS, HOS and CAHPS data instead of the clinical quality measures results under this final rule in section II.C.6.

We will post the technical requirements for portal submission and the alternative HIE/HIO submission, the HIE/HIO participating member definition, and other specifications for submission on our Web site for Medicare EPs on or before July 1, 2011 and for Medicare eligible hospitals and CAHs on or before April 1, 2011 for EHR adoption and to accommodate EHR vendors.

State Medicaid Agencies must follow the same requirements for meaningful use, including clinical quality measures, for example, across all payers and for the entire EHR reporting period for EPs and eligible hospitals. We expect that States will be able to accept the electronic reporting of clinical quality measures by their second year of implementing the EHR incentive program. States will include in their State Medicaid HIT Plan a description of how Medicaid providers will be able to electronically report clinical quality measures, subject to CMS prior approval.

i. Alternative Reporting Methods for Clinical Quality Measures

We proposed several alternative reporting methods to create a dataset of provider-submitted summary data. One such alternative we proposed is the development of a distributed network of EHRs where health information is retained locally in individual EP, eligible hospital, and CAH EHRs and only summary reports are submitted to CMS. Another alternative we proposed is the creation of databases of patient-level EHR data stored at the state or regional level.

The following is a summary of comments received regarding the proposed alternative reporting methods for clinical quality measures and our responses.

Comment: A commenter recommends aggregate reporting necessary for clinical quality measures to be able to be completed in secondary systems such as data warehouses.

Response: For Medicare, we require that the data source be from certified EHR technology. EPs, eligible hospitals

and CAHs may use intermediaries (data warehouses) to submit the EHR-generated clinical quality measure if available, assuming all requirements are met. States may seek CMS prior approval via their State Medicaid HIT Plans for how they expect Medicaid providers to report the required meaningful use data, including clinical quality measures. For example, States may propose that the data, while it originates in the providers' certified EHR technology, may be reported using a health information exchange organization or registry as an intermediary.

Comment: A few commenters communicated that the calculation and submission of quality measures may depend on the use of health information technology systems beyond those used by the EP such as data warehouses or registries that have to manipulate the data received. They indicated the final rule should not exclude the use of additional non-certified EHR technology to assist EPs in satisfying the quality reporting requirements provided the EP uses certified EHR technology to capture the data and to calculate the results.

Response: Certified EHR technology will be required to calculate the clinical quality measure results for the CMS specified measures we finalize in this final rule and transmit under the PQRI Registry XML specification, as provided in the ONC final rule (found elsewhere in this issue of the **Federal Register**).

Comment: Several commenters recommended inclusion of QRDA with PQRI XML for reporting, thus allowing vendors the ability to bypass PQRI XML if they plan to ultimately implement QRDA. There is also concern that switching to QRDA from XML will require duplicative investments. They recommended attestation for 2011 and 2012 as well as allowing use of QRDA in 2012.

Response: Electronic specifications will need to utilize standards that the certified EHR can support. ONC's final rule (found elsewhere in this issue of the **Federal Register**) limits this to PQRI Registry XML specifications. There is no current requirement that a certified EHR be able to produce QRDA.

j. Reporting Period for Reporting of Clinical Quality Measures

Sections 1848(o)(A)(2)(iii) and 1886(n)(3)(A)(iii) of the Act state that to demonstrate meaningful use of certified EHR technology for an EHR reporting period, an EP, eligible hospital, and CAH must submit information "for such period" on the clinical quality measures and other measures selected by the Secretary. Therefore we proposed that the reporting period for the clinical quality measures selected by the Secretary be the EHR reporting period.

Another alternative we proposed was a fixed reporting period of four quarterly reporting periods, or two six-month reporting periods. In terms of practice and precedent for other Medicare clinical quality measure reporting programs, all of these programs submit data to us at specific reporting intervals.

The following is a summary of comments received regarding the proposed EHR reporting period for EPs, eligible hospitals, and CAHs.

Comment: Some commenters asked for clarification on whether the EP must continuously report during the "entire payment year" or whether the reporting period for clinical quality measures covers a 12-month period. Other commenters questioned the timing of the requirements associated with the measures—whether the specifications for Stage 1 payment year 1 apply to EPs regardless of when the EPs become first eligible or whether the clinical quality measure specifications follow the calendar year.

Response: The EP only needs to report clinical quality measures once a year, as described at § 495.4. For Medicare EPs, eligible hospitals and CAHs, the EHR reporting period is 90 days for their first payment year. For Medicaid eligible providers, their first payment year in which they demonstrate meaningful use (which may be their second payment year, if they adopted, implemented or upgraded in their first payment year) also has a 90-day EHR reporting period. For Medicare EPs, eligible hospitals and CAHs, in their second payment year, the reporting period is 12 months. For Medicaid EPs and eligible hospitals, in their second payment year of demonstrating meaningful use, they also have a 12-month EHR reporting period. Related to the timing of the requirements, the final clinical quality measure specifications for 2011 and 2012 will be posted at the time of display of this final rule.

Comment: Some commenters requested clarification of the process for reporting in the entire payment year. A commenter requested clarification regarding whether the EP must continuously report during the entire payment year or whether the reporting period for clinical quality measures covers an entire 12-month period. Some commenters pointed out that reporting capability may not be available every day of the year due to information system availability.

Response: Technical requirements for electronic reporting will be posted on the CMS Web site prior to the reporting period. The reporting period refers to parameters of the data captured in the EHR or the services documented in the EHR, not the time when the submission of information regarding clinical quality measures is made. States will dictate for Medicaid EPs and eligible hospitals the timing of submission of their clinical quality measures data via electronic reporting. Submission could be as infrequent as once a year after the close of the reporting period. The reporting period beyond 2011 and 2012 for clinical quality measures will be determined in future rulemaking.

4. Demonstration of Meaningful Use

Section 1848(o)(3)(C) of the Act, as added by section 4101(a) of the HITECH Act, requires that as a condition of eligibility for the incentive payment, an EP must demonstrate meaningful use of certified EHR technology (other than the reporting on clinical quality and other measures) as discussed in section II.A.3 of this final rule in the manner specified by the Secretary, which may include the following: An attestation, the submission of claims with appropriate coding, a survey response, reporting of clinical quality or other measures, or other means. Similarly, section 1886(n)(3)(c) of the Act, as added by section 4102(a) of the HITECH Act, requires that hospitals seeking the incentive payment demonstrate meaningful use of certified EHR technology in the manner specified by the Secretary. Section 1903(t)(6)(C)(i)(II) of the Act, as added by section 4201(a)(2) under the HITECH Act, states that a Medicaid EP or eligible hospital must demonstrate meaningful use through a "means that is approved by the State and acceptable to the Secretary." In addition, pursuant to section 1903(t)(9) of the Act, a State must demonstrate to the satisfaction of the Secretary that the State is conducting adequate oversight, including the routine tracking of meaningful use attestations and reporting mechanisms.

a. Common Methods of Demonstration in Medicare and Medicaid

As proposed, in the final rule, we are adopting a common method for demonstrating meaningful use in both the Medicare and Medicaid EHR incentive programs, for the same reasons we have a uniform definition of meaningful use. The demonstration methods we adopt for Medicare would automatically be available to the States for use in their Medicaid programs. The Medicare methods are segmented into two parts, as discussed in section II.4.b of this final rule. States seeking to

modify or propose alternative demonstration methods must submit the proposed methods for prior CMS approval. This process is discussed more fully in section II.D.7.b.2.c. of this final rule.

b. Methods for Demonstration of the Stage 1 Criteria of Meaningful Use

Our final regulations, at § 495.8, will require that for CY 2011, EPs demonstrate that they satisfy each of the fifteen objectives and their associated measures of the core set listed at § 495.6(d) and five of the objectives and their associated measures from the menu set listed at § 495.6(e) unless excluded as described in § 495.6(a)(2). (An exclusion will reduce the number of objectives/measures the EP must satisfy by the number that is equal to the EP's exclusions. For example, an EP that can exclude two menu objectives/measures is required to satisfy only three of the objectives and associated measures from the menu set. Similarly, an exclusion will reduce the number of core objectives/measures that apply). We permit only those exclusions that are specifically indicated in the description of each objective and its associated measure (§ 495.6(d) for the core set and § 495.6(e) for the menu set). If an exclusion exists and the EP meets the criteria for it, the EP would report to CMS or the States that fact rather than demonstrating that they satisfy the objective and associated measure. At § 495.8, we will require that for FY 2011, eligible hospitals and CAHs demonstrate that they satisfy each of the fourteen objectives and their associated measures of the core set listed at § 495.6(f) and five of objectives and their associated measures from the menu set listed at § 495.6(g) unless excluded as described in § 495.6(b)(2). As with EPs, all exclusions are specifically indicated, in the description of the objective and associated measures (§ 495.6(f) for the core set and § 495.6(g) for the menu set) and an exclusion will reduce the number of objectives and associated measures an eligible hospital or CAH must satisfy (see above example for EPs). If an exclusion exists and the hospital meets the criteria for it, the eligible hospital or CAH would report to CMS or the States that fact rather than demonstrating that they satisfy the objective and associated measure. Finally, as specified in 495.316(d), for those participating in the Medicaid EHR incentive program, the State may alter the requirements for demonstrating that an EP or eligible hospital is a meaningful user, with regard to four specific objectives and measures. For these objectives and measures, the State may also choose to make a menu-set objective a core objective. Such State additions could increase the core or menu set objectives and measures that must be satisfied.

For payment years beginning in CY 2012 and subsequent years, our final regulations, at § 495.8, will require that for Stage 1 of meaningful use, EPs demonstrate that they satisfy each of the 15 objectives and their associated measures of the core set listed at § 495.6(d), except § 495.6(d)(4) "Report ambulatory quality measures to CMS or, in the case of Medicaid EPs, the states" and 5 of the objectives and their associated measures from the menu set listed at § 495.6(e) unless excluded as described in § 495.6(a)(2). The form and mechanism for excluding an objective and its associated measure is the same for CY2012 and subsequent years as it is for CY2011. The ability for States to add certain requirements is the same for CY 2012 and subsequent years as it is for CY 2011. The EP must demonstrate that they satisfy the objective "Submitting quality measure to CMS or the States" through electronic reporting of clinical quality measures to CMS or the States, as specified in section II.A.3 of this final rule. For payment years beginning in FY2012 and subsequent years, our final regulations, at § 495.8, will require that eligible hospitals and CAHs demonstrate that they satisfy each of the fourteen objectives and their associated measures of the core set listed at § 495.6(f), except § 495.6(f)(3) "Report hospital quality measures to CMS or, in the case of Medicaid EPs, the states" and five of the objectives and associated measures from the menu set listed at § 495.6(g) unless excluded as described in § 495.6(b)(2). The form and mechanism for excluding an objective and its associated measure is the same for FY2012 and subsequent years as it is for FY2011. The ability for States to add certain requirements also is the same for FY 2012 and subsequent years as it is for FY 2011. The eligible hospital or CAH must demonstrate that they satisfy the objective "Submitting quality measure to CMS or the States" through electronic reporting of clinical quality measures to CMS or the States, as specified in section II.A.3 of this final rule.

Except for the clinical quality measures (for which we require electronic reporting in CY or FY 2012 and subsequent years as discussed above), satisfaction of meaningful use objectives and associated measures may be demonstrated through attestation. Specifically, we will require that EPs, eligible hospitals and CAHs attest through a secure mechanism, such as through claims based reporting or an online portal. For the Medicare FFS and MA EHR incentive programs, CMS will issue additional guidance on this mechanism. For the Medicaid EHR incentive program, the States will include additional information in the State Medicaid HIT plans they submit to CMS to implement the program. We will require that an EP, eligible hospital or CAH would, through a one-time attestation following the completion of the EHR reporting period for a given payment year, identify the certified EHR technology they are utilizing and the results of their performance on all the measures associated with the reported objectives of meaningful use. We would require attestation through a secure mechanism because we do not believe that HIT will advance enough from its current state to allow for more automated and/or documented options of demonstrating meaningful use. As HIT matures we expect to base demonstration more on automated reporting by certified EHR technologies, such as the direct electronic reporting of measures both clinical and non clinical and documented participation in HIE. The first example is to the move from attestation for clinical quality measures to direct reporting in 2012 and subsequent years for EPs, eligible hospitals and CAHs. As HIT advances we expect to move more of the objectives away from being demonstrated through attestation. However, given the current state of HIT, we believe that imposing such demonstration requirements for 2011 would pose significant barriers to participation in the EHR incentive programs.

We believe that the means by which EPs, eligible hospitals and CAHs demonstrate meaningful use should work for all provider types. We also believe that uniform means of demonstration for EPs, eligible hospitals and CAHs are preferred and that a greater burden should not be placed on one or the other. In addition, we do not believe that demonstration of meaningful use could require use of certified EHR technology beyond the capabilities certified according to the ONC FR.

In addition to requiring electronic reporting of clinical quality measures beginning in 2012 in Medicare and Medicaid, we also leave open the possibility for CMS and/or the States to test options to utilize existing and emerging HIT products and infrastructure capabilities to satisfy other objectives of the meaningful use definition. The optional testing could involve the use of registries or the direct

electronic reporting of some measures associated with the objectives of the meaningful use definition. We do not require any EP, eligible hospital or CAH to participate in this testing in either 2011 or 2012 in order to receive an incentive payment. The state of electronic exchange varies widely across the country and is dependent on numerous Federal, State, local, non-profit and for-profit initiatives. Given this high state of flux, CMS and/or the States would have to issue considerable updated guidance to EPs, eligible hospitals and CAHs who wish to join in our efforts to explore the electronic exchange of information. Any testing should be based on the principle of electronic exchange of information from certified EHR technology either directly to the States or through an intermediary. For purposes of the programs in this final rule it would be counterproductive for an intermediary to collect information through paper abstraction.

We will issue further instructions on the specifics for submitting attestation through established outreach venues.

Comment: Several commenters submitted comments regarding the methods of demonstration for clinical quality measures.

Response: We summarize and respond to those comments in section II.A.3 of this final rule.

Comment: A few commenters submitted comments regarding section 1848(o)(2)(A) of the Act, which provides discretion to the Secretary to provide for the use of alternative means for meeting the requirements of meaningful use in the case of an eligible professional furnishing covered professional services in a group practice. Some of these commenters suggested that CMS provide such an alternative means in the final rule, while others suggested we consider doing so in future rulemaking.

Response: We did not propose any alternative means in the proposed rule. Given the per EP basis for most of the objectives and their associated measures, we did not believe group reporting would provide an accurate reflection of meaningful use. In addition, as the incentives payments are calculated on a per EP basis it is unclear to us how variance of meaningful use among EPs within the group should be treated. We believe the possible reduction in burden of attesting once per group versus once per EP is outweighed by the less accurate reporting, increased possibility of duplicate payments and decreased transparency. We note that many of the measures rely on data which could easily be stored at a group level such as a patient's demographics or medication lists and any EP with access to that information about a patient in their certified EHR technology and who sees that same patient in the EHR reporting period would receive credit for that patient in their numerator and denominator. Other aspects such as the enabling of drug-drug, drug-allergy checks, using CPOE and eRx could vary widely from EP to EP within the same group. We would also be concerned with EPs in multi-specialty group practices some of whom might be eligible for an exclusion, while others would not be. As requested by commenters we will continue to review this option in future rulemaking, but for this final rule we do not include the option to demonstrate meaningful use at a group level.

While we did not make changes to the demonstration of meaningful use requirements based on the comments above, we did make modifications to other aspects of the Stage 1 definition of meaningful use that required the descriptions of how many and which objectives and their associated measure EPs, eligible hospitals and CAHs to be altered accordingly. These changes are to the first paragraph of this section (II.4.b).

5. Data Collection for Online Posting, Program Coordination, and Accurate Payments

As described below, the HITECH Act requires the Secretary to post online the names of Medicare EPs and eligible hospitals and CAHs who are meaningful EHR users for the relevant payment year. Section 1903(t)(2) of the Act also requires us to ensure that EPs do not receive an EHR incentive payment under both Medicare and Medicaid. To fulfill these mandates, we must collect several data elements from EPs and eligible hospitals. Beyond these two direct HITECH Act requirements, CMS and the States also require certain data in order to accurately calculate and distribute the incentive payments.

a. Online Posting

In the proposed rule, we said that section 1848(o)(3)(D) of the Act requires the Secretary to list in an easily understandable format the names, business addresses, and business phone numbers of the Medicare EPs and, as determined appropriate by the Secretary, of group practices receiving incentive payments for being meaningful EHR users under the Medicare FFS program on our Internet Web site. We will not post information on group practices because we will not base incentive payments at the group practice level. Section 1886(n)(4)(B) of the Act, as added by section 4102(c) of the HITECH Act, requires the Secretary to list in an easily understandable format the names and other relevant data, as she determines appropriate, of eligible hospitals and CAHs who are meaningful EHR users under the Medicare FFS program, on our Internet Web site. Eligible hospitals and CAHs will have the opportunity to review the list before the list is publicly posted. Sections 1853(m)(5) and 1853(l)(7) of the Act, as added by sections 4101(c) and 4102(c) of the HITECH Act, require the Secretary to post the same information for EPs and eligible hospitals in the MA program as would be required if they were in the Medicare FFS program. Additionally, the Secretary must post the names of the qualifying MA organizations receiving the incentive payment or payments. We would collect the information necessary to post the name, business address and business phone numbers of all EPs, eligible hospitals and CAHs participating in the Medicare FFS and MA EHR incentive programs, and to post this information on our Web site. The HITECH Act did not require Medicaid EPs and eligible hospitals to be identified online so we will not do so.

We did not receive any comments and we are finalizing these provisions as proposed.

b. Program Election Between Medicare FFS/MA and Medicaid for EPs

In the proposed rule, we said section 1903(t)(2) of the Act prohibits an EP from receiving incentive payments under the Medicaid program unless the EP has waived any rights to incentive payments under the Medicare FFS or MA programs. Furthermore, section 1903(t)(7) of the Act requires the Secretary to assure no duplication of funding with respect to the Medicaid program, and the physician and MA incentive payments under sections 1848(o) and 1853(l) of the Act. This waiver and non-duplication requirement applies only to EPs meeting both the Medicare FFS/MA and Medicaid EHR incentive programs eligibility criteria, and does not apply to hospitals (which, if eligible, could receive incentive payments from both Medicare and Medicaid simultaneously). Section 495.10 allows an EP meeting the eligibility criteria for both the Medicare FFS/MA and Medicaid programs to participate in either program. We would also allow an EP to change his or her election once during the life of the EHR incentive programs after making the initial election, for payment years 2014 and

before. We believe this one-time election rule allows an EP whose patient volume no longer makes him or her eligible for the Medicaid program to nevertheless continue to receive incentive payments that would encourage the meaningful use of certified EHR technology. For example, an EP who moves to a different practice or geographically relocates practices may reduce his or her Medicaid patient volume, and therefore become ineligible for the Medicaid incentive payments. Allowing this EP to continue to receive incentive payments under Medicare (if eligible) continues the availability to the EP of the incentive for meaningfully using EHR technology, and would allow EPs a certain amount of flexibility in their operations. While allowing this flexibility creates administrative complexity, we believe a significant number of EPs could have their participation in the EHR incentive programs endangered due to changing circumstances unrelated to the EHR incentive programs.

In the proposed rule, we proposed at 495.10(e)(5), that an EP switching program is "placed in the payment year the EP would have been in, had the EP not switched programs." For example, if an EP decides to switch after receiving his or her Medicare FFS incentive payment for their second payment year, then the EP would be in its third payment year for purposes of the Medicaid incentive payments. For the final rule, we are clarifying that the EP is "placed in the payment year the EP would have been in had the EP begun in and remained in the program to which he or she has switched." We have modified 495.10(e)(5) accordingly.

We believe this clarification is necessary in order to address comments we received on non-consecutive payments. As outlined in II.A.1.c and d of this final rule, the definition of first, second, third, fourth, fifth, and sixth payment year differs across the Medicare and Medicaid programs. Section 1848(o)(1)(E)(ii) of the Act requires that the second Medicare payment year be successive to the first payment year and immediately follow it. Similarly, the third payment year must immediately follow the second, and so on. Thus, as explained in II.A.1.c., "if a Medicare EP receives an incentive in CY2011, but does not successfully demonstrate meaningful use or otherwise fails to qualify for the incentive in CY2012, CY2012 still counts as one of the EP's five payment years and they would only be able to receive an incentive under the Medicare EHR incentive program for three more years." The same rule, however, does not apply to the Medicaid EHR incentive program. For that program, EP payments may generally be non-consecutive. If an EP does not receive an incentive payment for a given CY or FY then that year would not constitute a payment year. For example, if a Medicaid EP receives incentives in CY2011 and CY2012, but fails to qualify for an incentive in CY 2013, they would still be potentially eligible to receive incentives for an additional four payment years.

The rules on consecutive payment, discussed above, govern how an EP should be treated after switching from the Medicaid to the Medicare EHR incentive program, or vice versa. As stated above, we believe that an EP that switches from the Medicaid to the Medicare program should be treated in the same manner as if such EP had started in the Medicare program. Payment years that are skipped in the Medicaid EHR incentive program thus become payment years that count against the EP's five years of payment in Medicare. For example, an EP that receives nonconsecutive payment under Medicaid for CYs 2011 and 2013 (but skips CY 2012), and then switches to the Medicare program in CY 2014, is in the fourth payment year in 2014, and is limited to that payment year's limit on incentive payments. Such an EP may receive only one more year of incentive payments under the Medicare EHR incentive program. We believe this rule is equitable, given that, had the EP started in the Medicare program, the EP would not have been able to benefit from non-consecutive payments available under the Medicaid EHR incentive program. We see no reason why EPs that switch from the Medicaid to the Medicare program should be treated differently from those who initially began in the Medicare program, and believe that any other rule might encourage gaming on the part of eligible professionals.

By the same token, an EP that switches from the Medicare to the Medicaid EHR incentive program will not be penalized for non-consecutive payment years accrued while in the Medicare program. For example, an EP that receives nonconsecutive payment under Medicare for CYs 2011 and 2013 (but skips CY 2012), and then switches to the Medicaid program in CY 2014, is in the third year of payment in 2014, and is potentially eligible to receive three additional years of payment under Medicaid (after 2014), for a total of six years of payment. Similar to our rationale described in the paragraph above, we do not believe an EP that switches to the Medicaid program should be treated differently from the EP that initially begins in the Medicaid program, as once the EP switches to the Medicaid program, there is no statutory requirement that the payment year ordering be consecutive.

We believe it is self-evident that an EP switching to a new program is subject to the requirements of such new program. Thus, for example, an EP switching from Medicaid to Medicare might be subject to a higher stage of meaningful use upon moving to the Medicare program. The EP also would be subject to fewer years of payment and to the requirement that no incentive payments may be made after 2016.

Finally, even after lining up the payment years, it is possible for an EP to exceed the payment cap under Medicaid by switching programs at the right time. We do not believe that the Congress intended for the payment caps to be exceeded under any circumstance, and therefore proposed that no EP should receive more than the maximum incentive available to them under Medicaid, which is the higher of the two caps. The last year incentive payment would be reduced if awarding the EP the full amount would exceed the overall maximum available under Medicaid. This is possible if an EP receives their first two payment years from Medicare and then the last four from Medicaid, as the cap would be exceeded by $250. If the EP receives the HPSA bonus available under the Medicare FFS EHR incentive program, this amount could be as much as $4,450. An EP who switches from Medicaid to Medicare could potentially exceed the Medicare threshold in a number of circumstances; however, since they will not be allowed to exceed the Medicaid threshold under any circumstance, we would pay the incentive for which they are eligible for a given payment year in whichever program they are in for that payment year until they exceed the Medicaid threshold. No incentive payments will be made to any EP that would allow the EP to exceed the Medicaid threshold. We anticipate that this would result in a prorated final year incentive payment. Finally, we proposed that the last year for making an incentive payment program switch would be CY 2014. In making this proposal, we considered that it is both the last year an EP can enroll in the Medicare EHR incentive program, and also the last year before the payment adjustments under Medicare can begin.

Comment: We received comments requesting clarification on when an EP could make their one switch.

Response: As described in our example, the EP could make their one

switch anytime after the receipt of an incentive payment under either the Medicare or Medicaid program. Since this policy would also apply to other program changes (for example, changing from one State to another, or updating registration data elements), we want to clarify when program registration changes can take place. An EP, eligible hospital or CAH sets into motion receipt of the incentive payment when they attempt to demonstrate meaningful use or demonstrate to the State efforts to adopt, implement, or upgrade to certified EHR technology. Therefore, prior to their first successful attempt to demonstrate meaningful use or demonstrate to the State efforts to adopt, implement, or upgrade to certified EHR technology, the EP could change their registration in either the Medicare or Medicaid EHR incentive program as many times as they wish. Furthermore, EPs and hospitals selecting the Medicaid incentive program may also switch freely prior to payment as described here. However, there may only be one payment from one State in any one payment year.

After consideration of the public comment received, we are modifying the provision at § 495.10(e)(2) to "(2) After receiving at least one EHR incentive payment, may switch between the two EHR incentive programs only one time, and only for a payment year before 2015". This modification better reflects our clarification in response to the comment received on the ability to switch between programs. For the final rule, we have made a few other technical changes to § 495.10, in addition to the changes made to § 495.10(e)(2) and (e)(5).

c. Data To Be Collected

In addition to information regarding the demonstration of meaningful use, in § 495.10 of this final rule we would collect the following administrative data for the Medicare and Medicaid EHR incentive programs to fulfill our requirements of online posting, avoidance of duplication of incentive payments, and to ensure accurate and timely incentive payments:

- Name, NPI, business address, and business phone of each EP or eligible hospital.
- Taxpayer Identification Number (TIN) to which the EP or eligible hospital wants the incentive payment made. For Medicaid EPs this must be consistent with assignment rules at § 495.10.
- For EPs, whether they elect to participate in the Medicare EHR incentive programs or the Medicaid EHR incentive program.
- For eligible hospitals and CAHs, their CCN.

To coordinate with the States to avoid duplication of payments, we would make available to the States through a single National Level Repository (NLR) the following additional data:

- Whether an EP or eligible hospital is a meaningful EHR user, and
- The remittance date and amount of any incentive payments made to an EP or eligible hospital.
- Other information as specified by CMS.

CMS, our contractors, and the States will have access to these data elements through the NLR maintained by CMS. The States will have to provide information to us on whether EPs or eligible hospitals are eligible for the Medicaid incentive program, whether EPs or eligible hospitals participating in the Medicaid program are meaningful EHR users, and when any Medicaid incentive payments are made and the amount of the payment. We will put in place processes for an EP or eligible hospital to change their information, including the one-time switch in EHR incentive program election by EPs.

Comment: We received comments that some EPs do not use TINs, but rather the EP's Social Security Number (SSN).

Response: In these cases the EP would submit a TIN, which is their SSN. An incorporated EP would have a TIN for the corporation that would be an EIN. The EP's own TIN remains his/her SSN.

Comment: Some commenters requested clarification on whether the business address is the physical location or the mailing address.

Response: We believe that the HITECH Act required reporting of this information to assist the public in identifying meaningful EHR users. We believe the practice location address serves this purpose better than the mailing address. However we will allow EPs to enter an alternate address for posting purposes but will not allow that address to be a post office box.

Comment: Commenters suggested that States would be allowed to determine the requirements associated with Medicaid provider TIN assignments.

Response: We discuss the requirements associated with TIN assignment in 495.10(f) and in the requirements associated with SMHPs in this preamble at section 495.332 SMHPs. States are responsible for making sure the providers are providing an acceptable TIN, consistent with the regulations at 495.10(f), which states that providers may only assign to certain TINs.

We clarified 495.10(f), to reflect this and other changes.

Comment: CMS received numerous comments about the schedule for and State's role in the national single repository where CMS will collect data elements on all registrants.

Response: The technological requirements and systems interfaces are outside this regulation and we look forward to providing additional guidance.

Comment: Some commenters recommended a shorter record retention period that the ten years proposed. Commenters recommended periods ranging from three to eight years. The reasons given for a shorter time period were the cost of record retention, no perceived need for a retention period longer than the incentive period, rapid changes in EHR technology and consistency with other unspecified retention requirements.

Response: After reviewing the comments, we agree with commenters that ten years is longer than necessary to ensure the integrity of the program. In considering a shorter retention period, we believe that there may be cause to look over the entire incentive period. As a Medicaid EP would be eligible for incentives over a six-year period if they successfully receive an incentive each year and that is the longest such period available to any participant in the Medicare and Medicaid EHR incentive programs, we adopt a new retention period of six years for this final rule.

Comment: We received a comment suggesting that Medicare adopt an appeals process similar to the one proposed for Medicaid.

Response: We expect to address Medicare appeals in future guidance.

6. Hospital-Based Eligible Professionals

Section 1848(o)(1)(C)(i) of the Act, as added by section 4101(a) of the HITECH Act, states that hospital-based EPs are not eligible for the Medicare incentive payments. Similarly, the majority of hospital-based EPs will not be eligible for Medicaid incentive payments under 1903(t)(2)(A) of the Act (the only exception to this rule is for those practicing predominantly in an FQHC or RHC). Sections 4101(a) and 4201(a) of the HITECH Act originally defined the term "hospital-based eligible professional" to mean an EP, such as a pathologist, anesthesiologist, or emergency physician, who furnishes substantially all of his or her Medicare-covered professional services during the relevant EHR reporting period in a hospital setting (whether inpatient or outpatient) through the use of the

facilities and equipment of the hospital, including the hospital's qualified EHRs. Following publication of our proposed rule, Congress modified the definition of hospital-based EPs. More specifically, on April 15, 2010, President Obama signed into law the Continuing Extension Act of 2010 (Pub. L. 111–157) which, in Section 5, made the following changes to the Social Security Act as it applies to both the Medicare and Medicare EHR incentives for EPs:

(1) Medicare—Section 1848(o)(1)(C)(ii) of the Social Security Act (42 U.S.C. 1395w–4(o)(1)(C)(ii)) is amended by striking 'setting (whether inpatient or outpatient)' and inserting 'inpatient or emergency room setting'.

(2) Medicaid—Section 1903(t)(3)(D) of the Social Security Act (42 U.S.C. 1396b(t)(3)(D)) is amended by striking 'setting (whether inpatient or outpatient)' and inserting 'inpatient or emergency room setting'.

These amendments were effective as if included in the enactment of the HITECH Act.

The above sections indicate that the determination of whether an EP is a hospital-based EP shall be made on the basis of the site of service, as defined by the Secretary, and without regard to any employment or billing arrangement between the EP and any other provider. For example, the hospital-based determination for an EP would not be affected by whether the EP is an employee of the hospital, under a contractual relationship with the hospital, or with respect to whether he or she has made a reassignment to the hospital for Part B billing purposes.

In addition, as discussed below, section 1848(a)(7)(D) of the Act, as added by section 4101(b) of the HITECH Act, exempts hospital-based EPs from the downward payment adjustment applied under section 1848(a)(7)(A)(i) of the Act to covered professional services provided during a payment year by EPs who are not meaningful EHR users for the relevant payment year beginning in 2015.

Based on section 4101(a) of the HITECH Act (and prior to the amendments in the Continuing Extension Act of 2010), we proposed that an EP would be a hospital-based EP and therefore ineligible to receive a Medicare or Medicaid EHR incentive payment if more than 90 percent of their services are provided in the following place of service (POS) codes for HIPAA standard transactions: 21—Inpatient Hospital, 22—Outpatient Hospital, 23—Emergency Room.

In addition, because of concerns that some primary care EPs who provide services to Medicare and Medicaid beneficiaries would be ineligible for the incentive payments under this proposed definition, in the proposed rule, we asked for comments on whether we should use another method for defining hospital-based EPs. We estimated that under this proposal, 12–13 percent of family practitioners under Medicare would be considered hospital-based. We did not have corresponding data for Medicaid EPs.

Comment: Many congressional representatives, hospital associations, individual providers and other commenters indicated that they believed that the proposal would inappropriately exclude from receiving EHR incentive payments EPs practicing in ambulatory settings such as those that practice in hospital provider-based departments (referred to by most commenters as "outpatient centers and clinics"). They indicated these centers and clinics provide services similar to services furnished by EPs in private offices. Many suggested that this definition may inhibit hospital investments in their outpatient primary care sites. Commenters believe the absence of any EP incentive payment in these settings may discourage hospitals from adopting EHR in ambulatory settings, particularly if doing so requires the purchase of an ambulatory-based EHR system (or an ambulatory component to be added to the hospital's EHR system). This is because the hospital's total incentive payment is based on total inpatient services. A hospital with a large outpatient department will not receive a higher incentive payment as a result of their outpatient services. These commenters indicated that ambulatory care EHRs are very different from inpatient EHRs because of the inherent differences between the types of care provided in each setting. Commenters differed somewhat to the extent that they provided specific alternatives. Some commenters went so far as to suggest that all EPs should be eligible to receive EHR incentive payments, regardless of where they practice.

Response: The changes to the hospital-based definition that are included in the Continuing Extension Act of 2010 (Pub. L. 111–157) discussed above address commenters concerns about ambulatory settings. These changes have been incorporated into the final rule. An EP will be a hospital-based EP and therefore ineligible to receive a Medicare (or Medicaid) EHR incentive payment if more than 90 percent of their Medicare (or Medicaid) services are provided in the following two place of service (POS) codes for HIPAA standard transactions: 21—Inpatient Hospital, 23—Emergency Room.

Comment: Some commenters argued that the proposed rule failed to make a critical distinction between hospital-based EPs who primarily use an EHR paid for and maintained by the hospital and those that did not. Some commenters suggested that an EP should be eligible for an EHR incentive payment if he or she had contributed 15 percent or more toward the cost of acquiring or maintaining the certified EHR. Some commenters requested that CMS change the definition of a hospital-based EP to read: "An EP who furnishes 90 percent or more of his or her covered professional services in the CY preceding the payment year in a hospital setting and primarily through the use of the qualified electronic health records of the hospital." The commenters believed that Congress's intent was to exclude only those EPs using qualified EHRs of the hospital, and that their approach would allow separate EHR incentive payments for EPs who have developed cutting-edge, patient centered EHR modules, thereby allowing for a clinical specificity not currently available in more generalized, hospital-wide EHR systems. Commenters stated that these EHR technologies are currently used in hospital settings and interoperate with hospital systems, but are paid for and primarily maintained by physician groups who see patients in hospital settings. The commenters indicate that these physician groups continue to invest in their EHRs through improvements, ongoing maintenance, and support staff employed to ensure optimal use of such technology. The commenters indicated that many early health IT champions, including hospital-based anesthesiologists, radiologists, pathologists, hospitalists, emergency medicine physicians, and neonatal physicians would be negatively affected by the proposal. These comments would apply to EP services provided in all hospital settings, including inpatient, outpatient, and emergency rooms.

Response: The statute, as now amended, indicates that hospital-based EPs are those who furnish substantially all their services in an inpatient or emergency room setting, such as a pathologist, anesthesiologist, or emergency physician, and who do so using the facility and equipment, including qualified electronic health care records, of the hospital. While commenters focused on the statutory language: "* * * including qualified electronic health care records of the hospital", they did not address the

broader meaning of the section which also includes the requirement that hospital-based EPs are those who furnish services "using the facility and equipment", including qualified electronic health care records of the hospital. We believe both phrases together are intended to provide an explanation of why hospital-based EPs are to be excluded from receiving EHR incentive payments (that is, that they would typically use the facilities and equipment, including the EHR, of the hospital and that therefore it would represent double payment if both hospitals and hospital-based EPs were to be paid incentives). We do not believe that the intent of this language was to require CMS to evaluate each EP as to whether they are using the EHR of the hospital. Further, the commenters did not address the significance of the next sentence of the statute, which clearly indicates that: "The determination of whether an eligible professional is a hospital-based eligible professional shall be made on the basis of the site of service * * *". Since Congress directed that site of service must be the determinant of whether an EP is hospital-based, we could not use individualized determinations of whether an EP is using the EHR of the hospital to deliver his or her services. Also, the subsequent legislation in the Continuing Extension Act of 2010 is consistent with the interpretation that the determination of whether an EP is hospital-based is based on the place where the EP furnishes services, as that subsequent legislation further limited hospital-based to those EPs providing substantially all services in the emergency room or inpatient hospital settings. Furthermore, our final policy is that eligible hospitals must demonstrate meaningful use based upon all applicable cases in the inpatient (21) and emergency department (23) site of service codes. Therefore, there would be duplication in measuring meaningful use for the purposes of making EHR incentive payments in the scenario proposed by these commenters.

The HITECH Act does not define the term "hospital" for purposes of establishing a definition of hospital-based EPs for Medicare and Medicaid. However, section 1861(e) of the Act defines the term a "hospital" to mean an institution that "is primarily engaged in providing, by or under the supervision of physicians, to inpatients (A) diagnostic services and therapeutic services for medical diagnosis, treatment, and care of injured, disabled, or sick persons, or (B) rehabilitation services for the rehabilitation of injured, disabled, or sick persons." Therefore, clearly EPs that practice primarily in inpatient hospital settings, as referenced in section 1861(e) of the Act, would be considered hospital-based EPs.

We will consider the use of place of service (POS) codes on physician claims to determine whether an EP furnishes substantially all of their professional services in a hospital setting and is, therefore, hospital-based. This code set is required for use in the implementation guide adopted as the national standard for electronic transmission of professional health care claims under the provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). HIPAA directed the Secretary of HHS to adopt national standards for electronic transactions. These standard transactions require all health plans and providers to use standard code sets to populate data elements in each transaction. The Transaction and Code Set Rule (65 FR 50312) adopted the ASC X12N–837 Health Care Claim: Professional, volumes 1 and 2, version 4010, as the standard for electronic submission of professional claims. This standard names the POS code set currently maintained by CMS as the code set to be used for describing sites of service in such claims and is available at *http://www4.cms.gov/PlaceofServiceCodes/Downloads/posdatabase110509.pdf.*

From this code set, we would consider the use of the following POS codes to determine whether an EP is a hospital-based eligible professional for Medicare:

- 21—Inpatient Hospital—is a facility, other than psychiatric, which primarily provides diagnostic, therapeutic (both surgical and nonsurgical), and rehabilitation services by, or under, the supervision of physicians, to patients admitted for a variety of medical conditions.
- 23—Emergency Room, Hospital—is a portion of a hospital where emergency diagnosis and treatment of illness or injury is provided.

Comment: Most commenters were supportive of the proposal to define "substantially all" of his or her covered professional services in a hospital setting as EPs who furnish at least 90 percent of his/her services in a hospital setting. However, some commenters expressed concerns that this threshold will be too high starting in 2015 when the time comes to determine which EPs should be subject to penalties for failure to become meaningful users of certified EHR technology. A few commenters misunderstood the proposal and requested that a hospital-based EP be defined as one who provides at least 90 percent of his or her services, defined as encounters and not as charges.

Response: The statutory definition of hospital-based EP provides that to be considered a hospital-based EP, the EP must provide "substantially all" of his or her covered professional services in a hospital setting. Therefore, we must identify the minimum percentage of an EP's covered professional services that must be provided in a hospital setting in order for the EP to be considered as providing "substantially all" of his or her covered professional services in a hospital setting. Consistent with the statute, we proposed to make this determination on the basis of services performed by each EP, not the charges for each EP. We are finalizing the proposed definition of "substantially all" as furnishing at least 90 percent of services in a hospital setting. We believe a 90 percent threshold certainly would qualify as "substantial."

Comment: Representatives of surgeons asked that CMS make an accommodation to the hospital-based definition to account for services paid under a global fee.

Response: The determination of whether or not an EP is hospital-based is determined individually for each EP. A global fee is a single payment for a bundle of services, some of which could be performed in a hospital such as major surgery or hospital visits, whereas some could be performed in an office such as follow-up visits, CMS does not have data, for the place of service for services performed by individual EPs when the services are paid as part of a global fee. We considered possibilities for using national level estimates for individual services typically performed under global fees as proxies for services provided by individual EPs. However, this would add significant additional operational complexity to the determination of hospital-based status and we have not pursued this approach.

Comment: Some commenters requested that CMS establish a process by which EPs could know in advance of a payment year whether CMS considered them as being hospital-based and therefore ineligible for an incentive payment.

Response: To the extent practical, we intend on establishing a process whereby the EP would know his/her hospital-based status during the registration period. We plan to provide information to EPs regarding their hospital-based status as early as possible (that is, no later than early in each payment year). As indicated in the proposed rule, we will make a determination for Medicare incentive

payment purposes, as to whether or not an EP is hospital-based by annually analyzing an EP's claims history from the prior year. In the proposed rule we indicated that we would use claims data from the prior calendar year to make hospital-based determinations for EPs. However, in order to provide information regarding the hospital-based status of each EP at the beginning of each payment year, we will need to use claims data from an earlier period. Therefore, we will use claims data from the prior fiscal year (October through September). Under this approach, the hospital-based status of each EP would be reassessed each year, using claims data from the fiscal year preceding the payment year. The hospital-based status will be available for viewing beginning in January of each payment year. For Medicaid purposes, State Medicaid agencies will make the determination about whether or not an EP is hospital-based by analyzing an EP's Medicaid claims data, or in the case of EPs who deliver care via Medicaid managed care programs, by analyzing either encounter data or other equivalent data sources, at the State's option. For purposes of making this determination, States would be permitted to use data either from the prior fiscal or calendar year.

After consideration of the public comments received, we are revising the definition of hospital based EPs in this final rule. An EP will be defined as being hospital-based and therefore ineligible to receive an EHR incentive payment under either Medicare or Medicaid, regardless of the type of service provided, if more than 90 percent of their services are identified as being provided in places of service classified under two place of service codes 21 (Inpatient Hospital) or 23 Emergency Room, Hospital. We plan to reassess the hospital-based status of each EP for Medicare purposes each year, using claims data from the fiscal year immediately preceding the payment year. Based on preliminary claims data from the first 9 months of 2009, CMS currently estimates that, under this final definition of hospital-based EPs, about 14 percent of Medicare EPs (physicians) would be considered hospital-based and thus not eligible to receive any incentive payments. We do not have any data on Medicaid practitioners.

7. Interaction With Other Programs

In the proposed rule, we described how the HITECH Act addresses interactions between the Medicare EHR incentive program and the E-prescribing Incentive Program authorized by MIPPA. Under section 1848(m)(2)(D) of the Act, as added by section 4101(f)(2)(B) of the HITECH Act, if a Medicare FFS or MA EP receives an incentive payment from the Medicare EHR incentive program, the EP (or group practice) is not eligible to also receive the incentive payment under the E-prescribing Incentive Program created by MIPPA. Given the payment timelines in this final rule for the Medicare EHR incentive program and the existing payment timeline for the E-prescribing Incentive Program, we will know whether an EP received a Medicare EHR incentive payment before the e-prescribing Incentive Program payment is calculated. Thus we will exclude those EPs (or group practices) who accept a Medicare EHR incentive payment for a given year from being eligible for the e-prescribing Incentive Program payment for that same year. EPs receiving a Medicaid EHR incentive payment would remain eligible for the Medicare MIPAA E-Prescribing Incentive Program payment.

As the HITECH Act does not specify any other restrictions on participation in other programs and participation in the Medicare and Medicaid EHR incentive programs, we do not propose any other restrictions. There may be opportunities to avoid duplication of reporting requirements among our various programs. In section II.A.3. of this final rule, we discuss how we will avoid duplication of reporting requirements for clinical quality measures.

Comment: Some commenters requested more information on efforts to avoid duplication of requirements and highly encouraged CMS to do everything it could in this regard.

Response: We address comments on the avoidance of duplication of requirements in several other areas of this rule where more specifics can be provided.

Comment: Commenters generally supported our proposal to only apply the limitation of participation in multiple programs to the limitation outlined in the HITECH Act.

Response: We continue to believe that providers should be able to participate in every program for which they are statutorily eligible and therefore are maintaining our proposal to only limit Medicare EPs from receiving either the Medicare EHR incentive payment or the Medicare E–Prescribing incentive payment.

B. Medicare Fee for Service Incentives

1. Incentive Payments for Eligible Professionals (EP)

Section 1848(o)(1)(A) of the Act, as amended by section 4101(a) of the HITECH Act, provides for incentive payments to EPs who are meaningful users of certified EHR technology during the relevant EHR reporting periods. Section 1848(o)(1)(A)(i) of the Act provides that EPs who are meaningful EHR users during the relevant EHR reporting period are entitled to an incentive payment amount, subject to an annual limit, equal to 75 percent of the Secretary's estimate of the Medicare allowed charges for covered professional services furnished by the EP during the relevant payment year. Under section 1848(o)(1)(B)(ii)(VI) of the Act, an EP is entitled to an incentive payment for up to 5 years. In addition, in accordance with section 1848(o)(1)(A)(ii) of the Act, there shall be no incentive payments made with respect to a year after 2016. The incentive payments would be disbursed from the Federal Supplementary Medical Insurance Trust Fund, as provided for under section 1848(o)(1)(A)(i) of the Act. As noted in section II.A. of this final rule, EPs who qualify for both the Medicare and Medicaid incentive payments must elect to receive payments from one program or the other.

a. Definitions

In accordance with section 1848(o)(5)(C) of the Act, we will add a definition of the term "eligible professional" in our regulations at § 495.100 to mean a physician as defined under section 1861(r) of the Act. Section 1861(r) of the Act defines the term "physician" to mean the following five types of professionals, each of which must be legally authorized to practice their profession under state law: a doctor of medicine or osteopathy, a doctor of dental surgery or dental medicine, a doctor of podiatric medicine, a doctor of optometry, or a chiropractor. As discussed in section II.B.1.a of this final rule, in accordance with section 1848(o)(1)(C) of the Act, hospital-based EPs are not eligible for an incentive payment.

Section 1848(o)(5)(A) of the Act defines covered professional services as having the same meaning as in section 1848(k)(3) of the Act, that is, services furnished by an eligible professional for which payment is made under, or is based on, the Medicare physician fee schedule.

In accordance with section 1848(a)(1) of the Act, the Medicare allowed charge for covered professional services is the lesser of the actual charge or the Medicare physician fee schedule amount established in section 1848 the Act. As specified under section 1848(o)(1)(A)(i) of the Act, the

Secretary's estimate of allowed charges is based on claims submitted to Medicare no later than 2 months following the end of the relevant payment year. We proposed to codify these specifications and definitions in our regulations at 495.102.

Comment: The commenters who expressed concerns about the EP definition under the Medicare program had one overall theme. It is that the definition is too narrow and that it should be more inclusive of other health professionals in order to serve the goals of the HITECH Act. The commenters stated that they believe that the intent of the electronic health records (EHR) legislation is to encompass a wide range of health professionals to incorporate efficient and effective EHR technology. Specifically, these commenters stated that the Medicare EP definition should be expanded to include nonphysician practitioners and health professionals such as physician assistants (PAs), nurse practitioners (NPs), clinical nurse specialists (CNSs), certified nurse-midwives (CNMs), clinical psychologists (CPs), clinical social workers (CSWs), certified registered nurse anesthetists (CRNAs), registered nurses (RNs), occupational therapists (OTs), and credentialed pedorthists who make shoes for diabetic patients. Additionally, we received a comment that the Medicare EP definition should recognize health professionals who provide health support services as members of an interdisciplinary health care team such as a team consisting of diabetes nurse educators, NPs, pharmacists, PAs, dieticians, and case managers.

Representatives of rural health clinics (RHCs), Federally qualified health centers (FQHCs), ambulatory surgical centers (ASCs), outpatient clinics and dialysis facilities commented that their providers should also be included under the Medicare EP definition to qualify for Medicare incentive payments. These providers believe that they are a key set of contributors that will implement and meaningfully utilize electronic health care record program modules that directly benefit their patient populations. Alternatively, one of these commenters recommended that provider eligibility should be determined by type of service provided rather than by location of service and should include non-physician clinicians and providers.

The sub-theme of the comments that we received on the Medicare EP definition is that the definition of an "eligible provider" that qualifies for EHR incentive payments should be a common definition for the Medicare and Medicaid programs. The commenters believe that a uniform definition of an EP would be more administratively efficacious for the Medicare and Medicaid programs considering that EPs are permitted to switch participation between the Medicare and Medicaid incentive programs one-time after the initial payment year.

An organization representing pathologists expressed concern that the Medicare EP definition, as currently drafted would subject certain pathologists to payment incentive penalties for not being meaningful EHR users if the pathologists performed less than 90 percent of their professional services in any inpatient or outpatient setting in the prior year. All EPs have to report on all Core Measures and a subset of clinical measures that pathologists could not meet in their day-to-day practice given the nature of pathology's scope of practice. Accordingly, this organization recommended that CMS ensure that pathologists who are currently defined as Medicare EPs be considered as "non-qualifying" EPs, that are exempt from future meaningful user penalties.

Response: While we appreciate the comments that we received on the Medicare EP definition, we are unable to expand or alter this statutory definition or consolidate it with the Medicaid program EP definition as suggested by the commenters. Under the EHR incentive payment program, the law provided a separate Medicare EP definition rather than giving the Secretary authority or discretion to determine who is a Medicare EP or, who is an EP for both the Medicare and Medicaid programs.

Comment: A commenter requested clarification of the method used for determining Medicare incentives for EPs practicing in a rural health clinic.

Response: The amount of the EHR incentive payment is based on the estimated allowed charges for all covered professional services furnished by an EP during the payment year, subject to the maximum payment amount for the payment year for the EP. For EPs that practice in an RHC, EHR incentive payments are based on the amount of covered professional services that are not part of the RHC package of services and are billed by the EP through the physician fee schedule.

Comment: A commenter suggested that the definition of allowable charges be amended to include the RHC schedule of services, or allow providers who use UB92 and HCFA 1500 forms to be eligible for the EHR incentive payment.

Response: The allowed charge is the amount that Medicare determines to be reasonable payment for a provider or service under Part B, including coinsurance and deductibles. RHC services furnished by an EP are not considered covered professional services for purposes of the Medicare EHR because they are not billed or paid under the physician fee schedule.

After consideration of the public comments received on the term, "eligible professional" for the Medicare program, we are adopting the Medicare EP definition in our regulations at § 495.100 that state that a Medicare EP is a physician as defined under § 1861(r) of the Social Security Act. That is, a Medicare EP is a doctor of medicine or osteopathy, a doctor of dental surgery or dental medicine, a doctor of podiatric medicine, a doctor of optometry, or a chiropractor and a doctor who is legally authorized to practice their profession under State law.

b. Incentive Payment Limits

Section 1848(o)(1)(B)(i) of the Act sets forth the annual limits on the EHR-related incentive payments to EPs. Specifically, section 1848(o)(1)(B) of the Act provides that the incentive payment for an EP for a given payment year shall not exceed the following amounts:

- For the EP's first payment year, for such professional, $15,000 (or, $18,000 if the EP's first payment year is 2011 or 2012).
- For the EP's second payment year, $12,000.
- For the EP's third payment year, $8,000.
- For the EP's fourth payment year, $4,000.
- For the EP's fifth payment year, $2,000.
- For any succeeding year, $0.

Under section 1848(o)(1)(B)(iv) of the Act, for EPs who predominantly furnish services in a geographic HPSA (as designated by the Secretary under section 332(a)(1)(A) of the Public Health Service (PHS) Act), the incentive payment limitation amounts for each payment year are increased by 10 percent. Section 1848(o)(1)(B)(iii) of the Act also provides for a phased reduction in payment limits for EPs who first demonstrate meaningful use of certified EHR technology after 2013. Specifically, if the EP's first payment year is after 2013, then the annual limit on the incentive payment equals the annual limit applicable to an EP whose first payment year is 2013. Accordingly, if the EP's first payment year is 2014, the EP's maximum incentive payment will be $12,000 in 2014, $8,000 in 2015, and $4,000 in 2016. Section 1848(o)(1)(B)(v)

of the Act provides that if the EP's first payment year is after 2014, then the applicable incentive payment limit for such year and any subsequent year shall be $0. In other words, an EP who does not qualify to receive an EHR-related incentive payment prior to 2015 will not receive any of these incentive payments.

Comment: One commenter believes that the methodology for determining the incentive payments under the incentive program does not offer each EP an equal incentive, despite being held to the same standards of adoption and implementation.

Response: We are uncertain why the commenter believes that the methodology for determining the incentive payments under the incentive program does not offer each EP an equal incentive to adopt EHR technology. However, the payment methodology in the statute for EPs (as well as the methodologies for hospitals and CAHs) is quite prescriptive, and offers no discretion for us to adopt revisions designed to enhance incentives for adoption. For EPs, the HITECH Act defines the incentive payment amount as, "an amount equal to 75 percent of the Secretary's estimate * * * of the allowed charges under this part of all such covered professional services furnished by the eligible professional during such year."

c. Increase in Incentive Payment for EPs Who Predominantly Furnish Services in a Geographic Health Professional Shortage Area (HPSA)

Section 1848(o)(1)(B)(iv) of the Act provides that the amount of the annual incentive payment limit for each payment year be increased by 10 percent for EPs who predominantly furnish services in an area that is designated by the Secretary (under section 332(a)(1)(A) of the PHS Act) as a geographic health professional shortage area (HPSA). This section of the PHS Act refers to geographic HPSAs, which are areas that have been designated by the Secretary as having a shortage of health professionals, based on the population-to-provider ratio and other factors. HPSAs are located in every State, and in both rural and urban areas.

Geographic HPSAs are defined in 42 CFR Part 5 and include primary medical care, dental, and mental health HPSAs. In accordance with the statute, we will increase the limits per payment year by 10 percent for EHR-related incentive payments to EPs who predominantly furnish covered professional services in a geographic primary medical care, dental, or mental health HPSA.

We proposed that for an EP to be considered as "predominantly" furnishing covered professional services in a geographic HPSA, more than 50 percent of the EP's covered professional services must be furnished in a geographic HPSA. We stated that using "more than 50 percent" as the criterion to define "predominantly" is consistent with how the term is defined in general parlance as well as how the definition is used for purposes of other aspects of the Medicare program. Our data indicates that most physicians furnishing services in a HPSA furnish 100 percent of their covered services in a HPSA, and only very few furnish services in both HPSA and non-HPSA areas.

To determine whether an EP has furnished more than 50 percent of his/her covered professional services in a geographic HPSA, we proposed to utilize frequency of services provided over a 1-year period from January 1 to December 31, rather than basing it on the percentage of allowed charges. We proposed to make the incentive payment to the EP based on an EP's estimated allowed charges for the relevant payment year.

We proposed that once we compile a full year of data, we would determine eligibility for the EHR HPSA payment limit increase for the payment year based on whether the EP provided more than 50 percent of his/her services in a geographic HPSA during the payment year. The determination would be made based on claims submitted not later than 2 months after the end of the year. If we determine that the EP provided more than 50 percent of his/her services in a geographic HPSA and is therefore eligible for the EHR HPSA payment limit increase, we would then make an additional lump sum payment to reflect that increased limit amount based on the estimated allowable charges for that EP for the prior year. The additional amount would be paid no later than 120 days after the end of the prior year for which the EP was eligible for the 10 percent EHR HPSA payment limit increase.

Most physicians furnishing services in a HPSA furnish 100 percent of their covered services in a HPSA. Section 1848(o)(1)(B)(iv) of the Act also authorizes us to apply the provisions of sections 1833(m) and (u) of the Act in implementing this 10 percent EHR HPSA payment limit increase, as the Secretary determines appropriate. Section 1833(m) of the Act establishes the HPSA bonus program, which provides a 10 percent bonus to physicians who furnish Medicare covered professional services in a geographic HPSA.

Section 1833(m)(1) of the Act provides that physicians who furnish covered professional services in a year in an area that is designated as a geographic HPSA prior to the beginning of the year are eligible to receive the HPSA bonus for services furnished during the current year. We have interpreted this to mean that bonus payments should continue throughout the current year, even if the area loses its designation as a geographic HPSA during the current year. Physicians furnishing Medicare-covered professional services in an area that is not designated as a geographic HPSA by December 31 of the prior year are not eligible to receive the HPSA bonus for the current year, even if the area is subsequently designated as a geographic HPSA during the current year. We will apply these same rules for the 10 percent EHR HPSA payment limit increase provided under section 1848(o)(1)(B)(iv) of the Act.

Section 1833(m)(2) of the Act also provides that geographic HPSAs that consist of an entire county be identified and the bonus paid automatically. We publish a list annually of the zip codes that are in these areas on our Web site at *http://www.cms.hhs.gov/HPSAPSAPhysicianBonuses/01_Overview.asp#TopOfPage.*

Physicians furnishing Medicare-covered professional services in a zip code that is on this list automatically receive the HPSA bonus payment. Physicians furnishing Medicare covered professional services in a zip code that is not on this list but that was designated as a geographic HPSA as of December 31 of the prior year must use a modifier when submitting a Medicare claim in order to receive the HPSA bonus.

Comment: We received a comment stating that many EPs who work in a HPSA do so only on a part-time basis and that most would not qualify for the 10 percent increase in the payment limit based on the proposed threshold of furnishing more than 50 percent of his/her covered professional services in a geographic HPSA. The commenter suggested that an EP should be able to qualify for the ten percent increase in the payment limit if at least 25 percent of his/her covered services during an EHR reporting period are furnished in a HPSA.

Response: The statute states that the annual payment limit be increased by ten percent for EPs who predominantly furnish services in a geographic HPSA. We continue to believe that "more than fifty percent" correctly reflects the

meaning of the word "predominantly" as used in this statute. As noted above, our data also indicate that most physicians furnish all of their services either in a HPSA or outside of a HPSA, and only very few furnish services in both HPSA and non-HPSA areas.

Comment: Several commenters requested that Federally Qualified Health Centers (FQHCs) be eligible to receive the ten percent increase in the payment limit for EPs who predominantly furnish services in a HPSA since the FQHC is a legal entity that bills Medicare and receives payment for services provided by physicians.

Response: The 10 percent increase in the payment limit applies to EPs who predominantly furnish services in a geographic HPSA. FQHCs and RHCs are not eligible for the ten percent increase in the payment limit because they do not meet the definition of EP as specified in section 1848(o)(5)(C) of the Act. Please see others sections of the regulation that discuss the criteria to be considered an EP. Additionally, we wish to restate that FQHCs are not entitled to any Medicare or Medicaid incentive payments under this program.

Comment: A commenter suggested that "predominantly" be defined as the location where the EP provides the most services, so that an EP who sees patients in more than two locations could receive the increase in the payment limit if he/she provided more care in the HPSA location than any other location. The commenter also suggested that if this is too difficult to administer, we should accept an attestation from the EP.

Response: We are aware that many physicians, especially in rural areas, furnish services in more than one location, and appreciate the commenter's interest in making the HPSA payment limit increase available to these EPs. If we were to accept this recommendation, then an EP who worked in three locations at forty percent, thirty percent, and thirty percent time respectively, would be eligible for the HPSA payment limit increase if the first location was in a geographic HPSA. If the EP worked in four locations at thirty percent, twenty-five percent, twenty five percent, and twenty percent time respectively, he/she would be eligible for the HPSA payment limit increase if the first location was in a geographic HPSA. We considered this suggestion and concluded that lowering the threshold for services furnished in a HPSA would be inconsistent with the intent of the HPSA payment limit increase, which is to provide an incentive to promote the use of EHR by EPs who practice predominantly in HPSAs. Also, if an EP who worked in more than two locations and furnished services in a HPSA only thirty or forty percent of his/her time was eligible for the HPSA payment limit increase, this would be unfair to an EP who worked in two locations and spent forty-five percent of his/her time in a HPSA and fifty-five percent time in a non-HPSA, because this EP would not be eligible for the HPSA payment limit increase even though he/she spent more total time in a HPSA.

Comment: A commenter stated that the proposed HPSA payment limit increase was being applied inconsistently because an EP would still get the payment limit increase if the designation was removed mid-year, and would not get the payment limit increase if the designation was added mid-year.

Response: Section 1848(o)(1)(B)(iv) of the Act authorizes us to apply the provisions of the HPSA bonus program to the implementation of the EHR HPSA payment limit increase. The HPSA bonus is paid to physicians who furnish Medicare-covered professional services in an area that is designated as a geographic HPSA as of December 31 of the prior year. They are authorized to receive the HPSA bonus throughout the current year, even if the area loses its designation as a geographic HPSA during the current year. Physicians furnishing Medicare-covered professional services in an area that is not designated as a geographic HPSA as of December 31 of the prior year are not eligible to receive the HPSA bonus for the current year, even if the area is subsequently designated as a geographic HPSA during the current year. We proposed to use the same methodology for the HPSA EHR program, and believe that this is consistent with the statute.

After consideration of the public comments received, we are finalizing these provisions as proposed.

d. Form and Timing of Payment

Section 1848(o)(1)(D)(i) of the Act, as amended by section 4101(a) of the HITECH Act, provides that the incentive payments may be disbursed as a single consolidated payment or in periodic installments as the Secretary may specify. We proposed to make a single, consolidated, annual incentive payment to EPs. Payments would be made on a rolling basis, as soon as we ascertained that an EP had demonstrated meaningful use for the applicable reporting period (that is, 90 days for the first year or a calendar year for subsequent years), and reached the threshold for maximum payment.

Section 1848(o)(1)(A) of the Act provides that "with respect to covered professional services provided by an eligible professional," the incentive payment "shall be paid to the eligible professional (or to an employer or facility in the cases described in clause (A) of section 1842(b)(6))." Section 1842(b)(6)(A) of the Act allows for reassignment to an employer or entity with which the physician has a valid contractual arrangement allowing the entity to bill for the physician's services. Therefore, we proposed that EPs would be allowed to reassign their incentive payment to their employer or an entity which they have a valid employment agreement or contract providing for such reassignment, consistent with all rules governing reassignments. We proposed to preclude an EP from reassigning the incentive payment to more than one employer or entity. To implement this requirement, we proposed to use the EP's Medicare enrollment information to determine whether an EP belongs to more than one practice (that is, whether the EP's National Provider Identifier (NPI) is associated with more than one practice). In cases where the EP was associated with more than one practice, we proposed that EPs would select one tax identification number to receive any applicable EHR incentive payment.

As mentioned above, we proposed that payments would be made on a rolling basis, as soon as we ascertain that an EP has demonstrated meaningful use for the applicable reporting period (that is, 90 days for the first year or a calendar year for subsequent years), and reached the threshold for maximum payment. We proposed to add a new part 495.10(e) and (f) to permit reassignment of the incentive payment with certain limitations. The following is a summary of the comments we received and our responses.

Comment: Several commenters, including one representing Rural Health Clinics, requested clarification of the statement in the proposed rule (75 FR 1910) that an eligible professional (EP) is allowed to reassign his/her EHR incentive payment to an employer or other entity to which the EP has reassigned his/her payments for Medicare covered services. The commenters believe that the HITECH Act requires in such cases that any Medicare EHR incentive for which the EP qualifies must be paid to such employer or other entity. The commenters reference the phrases from the HITECH Act, "shall be paid" to an eligible professional (or to an employer or facility in cases described in the reassignment provisions of the Social

Security Act). In addition, the commenters referenced the phrase regarding the transfer of an EP's Medicaid EHR incentive which states that "such incentives are paid directly to such provider (or to an employer or facility to which such provider has assigned payments)". The commenters interpret these phrases to mean that an EP's EHR incentive payments (both Medicare and Medicaid) must be paid to an employer or other entity to which the EP has reassigned payments for his/her services.

Response: We do not agree with the commenters' conclusions regarding to whom the payments must be made. As we stated in the proposed rule, Section 1842(b)(6) of the Act allows, but does not require reassignment to an employer or entity with which the physician has a valid contractual arrangement allowing the employer or entity to bill for the physician's services. The HITECH Act provisions cited by the commenter similarly do not require that the EHR incentive payment be made pursuant to a reassignment, but provide that the payment may be made directly to the EP or to the employer or other entity. A physician reassigns payment based on the scope of his or her employment or contractual arrangement. Based upon our interpretation of the applicable provisions, we are finalizing our proposal at § 495.10(f) to permit EPs to reassign their incentive payments to their employer or to an entity with which they have a contractual arrangement, consistent with all rules governing reassignments including part 424, subpart F.

We are taking this opportunity to remind the public that if the EP wishes to reassign his or her incentive payment to the employer or entity with which the EP has a contractual arrangement, the parties should review their existing contract(s) to determine whether the contract(s) currently provides for reassignment of the incentive payment or if the contract(s) needs to be revised. Reassignment of the incentive payment must be consistent with applicable Medicare laws, rules, and regulations, including, without limitation, those related to fraud, waste, and abuse. For Medicaid, a discussion of reassignment of the incentive payment is found in section II.D.3.e of this final rule "Entities Promoting the Adoption of Certified EHR technology."

Comment: Several commenters stated that the rationale and objectives of the HITECH Act provisions regarding transfer of the EP's EHR incentives are merely to align EHR incentives and EHR costs. Therefore, they believe that the HITECH Act provisions support their view that Congressional intent was to prevent windfall EHR incentives to EPs who incur no EHR-related costs. The commenters also asserted that CMS's failure to address this issue will require entities that employ or contract with EPs to enter into negotiations and a separate agreement transferring the EP's EHR incentive payments to the employer or other entity.

Response: We do not agree with the commenters' statement that the Congress intended to prevent windfall EHR incentives to EPs who incur no EHR-related costs. Title IV, Division B of the HITECH Act establishes incentive payments under the Medicare and Medicaid programs for certain professionals and hospitals that meaningfully use certified EHR technology. The provisions are not focused solely upon the costs associated with the EHR technology. Rather, as we stated in the proposed rule (75 FR 1849), it focuses upon the adoption, implementation, upgrade, or meaningful use of the technology.

However, we do agree that some entities may have to review and/or negotiate current contractual arrangements to address the transfer of the incentive payments. The first payment year for the incentive payment is CY 2011, which we believe should afford parties sufficient time to reach a new agreement. For Medicaid, a discussion of reassignment of the incentive payment is found in section II.D.3.e of this final rule "Entities Promoting the Adoption of Certified EHR technology."

Comment: Several commenters supported our proposal that if an EP has reassigned his or her payments for services to more than one employer or entity, that only one of those employers or entities should receive the EP's EHR incentive payments for a particular EHR Reporting Period (75 FR 1910). The commenters do not believe that EPs should decide which employer or entity should receive his or her EHR incentive payment. Rather, the commenters stated that such payments should automatically be paid to the employer or entity that has received for the reporting period the largest percentage of the EP's Medicare or Medicaid payments for services.

Response: We are not persuaded to adopt the commenters' suggestion. We believe that the suggestion by the commenters would create administrative complexities for both CMS and EPs with little benefit. Many of these obstacles would be similar to those described in the proposed rule when discussing the possibility of making proportional EHR incentive payments (75 FR 1911). Therefore, we are finalizing our proposal to revise § 495.10(e) to preclude an EP from reassigning the incentive payment to more than one employer or entity. In cases where the EP is associated with more than one practice, EPs must select one TIN to receive any applicable EHR incentive payment.

Comment: The commenters also state that if an EP has incurred out-of-pocket costs in connection with an EHR provided by an employer or other entity to which the EP has reassigned payments for his or her services, the EP should be permitted to keep an amount of his or her EHR incentives equal to the amount of such costs incurred.

Response: The statute does not address this issue. It simply provides that the incentive payments are to be made directly to the EP or to an employer or other entity to which the EP has reassigned the incentive payment. Reassignment of the incentive payment must be consistent with applicable Medicare laws, rules, and regulations, including, without limitation, those related to fraud, waste, and abuse. We believe that any cost-sharing or subsequent distribution of the incentive payment, such as in the manner described by the commenter, should be resolved between the parties.

Comment: Several commenters urged CMS to clarify that any reassignment of the EP's EHR incentive payment should not constitute a financial arrangement within the meaning of the physician self-referral law, or remuneration within the meaning of the federal anti-kickback statute.

Response: The physician self-referral law prohibits a physician from making a referral for designated health services to an entity with which the physician or a member of the physician's immediate family has a financial relationship, unless an exception applies. For purposes of the physician self-referral law, a financial arrangement includes ownership or investment interests and compensation arrangements. The statute defines a "compensation arrangement" to mean any arrangement involving remuneration, direct or indirect, overt or covert, in cash or in kind. A reassignment of an EP's EHR payment would constitute remuneration, and we note that reassignment generally occurs in the context of an existing compensation arrangement (for example, employment). There are many potentially applicable exceptions for compensation arrangements that involve a physician's reassignment of Medicare payments.

Similarly, with respect to the anti-kickback statute, absent compliance with a safe harbor, a determination of whether a reassignment constitutes prohibited remuneration would be made on a case-by-case basis and we therefore decline to issue any statement regarding the application of the anti-kickback statute to a reassignment. For additional information regarding the anti-kickback statute, please refer to the OIG's Web site at *http://oig.hhs.gov.*

Comment: One commenter representing American Indian and Alaska Native health providers urged CMS to require that the HITECH/EHR Meaningful Use provider incentive payments be reassigned to the Tribal outpatient clinics, because the Tribal clinics developed the infrastructure not the EPs themselves, and purchased electronic medical record systems to complement the current Registration Patient Management Systems (RPMS) of the Indian Health Service. In addition, the commenter noted that many tribal outpatient clinics have employment contracts with their EPs. Thus, the commenters urged CMS to require that incentive EHR payments should be included in employment contracts to help protect the EP as employee and the Tribe as the employer.

Response: As stated above, section 1848(o)(1)(A) of the Act provides that the EP's incentive payment shall be paid to the eligible professional (or to an employer or other entity with which the physician has a valid contractual arrangement allowing the employer or other entity to bill for the physician's services). We recognize that some tribes purchased EHR systems based upon criteria established by the Indian Health Service. However, after careful consideration, we believe that the same standards concerning the incentive payments should apply. The EP and the Tribal outpatient clinic should jointly resolve whether the EP's EHR incentive payment will be reassigned to the Tribal outpatient clinic or made directly to the EP. Similarly, any decision by the Tribal outpatient clinic concerning whether to include language in its employment contract (or in the alternative, whether any pre-existing contract already requires reassignment of the payment), is a matter of contract interpretation that should be resolved by the parties themselves. This discussion is also addressed in the Medicaid section of this rule at II.D.4.a.3.

Comment: One commenter expressed concern about the potential tax consequences associated with an EP's reassignment of the EHR incentive payment by an independent contractor to a larger organization. The commenter recommended that a 1099 independent contractor should consult with his/her tax advisor before agreeing to reassign incentive payments and to ensure that the election to reassign is made before payment is sent from CMS or the State Medicaid Agency.

Response: The commenter's recommendation falls outside the scope of our authority. This is a matter for the 1099 independent contractor EP to consider.

Comment: Many national and state medical associations expressed concern regarding the proposed requirement that the EP must identify a Tax Identification Number (TIN) to which the EP's incentive payment should be made. They assert that this will not work for physicians who do not have a TIN, and are enrolled in Medicare or Medicaid through their Social Security Number (SSN). Therefore, the commenters recommend that CMS accept the SSN in lieu of the TIN, so that all eligible physicians are able to participate in the Medicare and Medicaid EHR incentive programs.

Response: We recognize that many physicians are enrolled in Medicare or Medicaid through their Social Security Number (SSN). Therefore, we are revising our proposal at § 495.10 that an EP must submit, in a manner specified by CMS, the Taxpayer Identification Number (TIN) to which the EP's incentive payment should be made. In finalized § 495.10(c), we provide that the TIN may be the EP's Social Security Number (SSN) to which the EP's incentive payment should be made. We note that if the physician is part of a group with more than one owner or organization that is incorporated, they would have a TIN for the corporation that is not the EP's SSN.

Comment: Some commenters recommended that the employer or entity to which an EP reassigns payment for covered services, should be deemed authorized to provide, on the EP's behalf, any documentation necessary for the EP to qualify for EHR incentive payments.

Response: We believe that this should be resolved by the parties themselves. There is nothing in the statute that requires an EP's employer or other entity to which an EP reassigns payment to provide any necessary documentation for an EP to qualify for EHR incentive payments. Rather, the finalized regulatory provision at § 495.8 provides that an EP must demonstrate that he or she satisfies each of the applicable objectives and associated measures under § 495.6. If the parties wish to have the necessary documentation furnished by the employer or entity, they should resolve this pursuant to an employment or contractual agreement. We are finalizing our proposal because we believe that making a single, consolidated payment would be the least administratively burdensome for both CMS and EPs. In addition, we believe a single, consolidated payment would reduce the possibility of fraud and duplicate payments. Several of these issues related to reassignment of payment are also addressed in the Medicaid section. See II.D.3.e.

e. Payment Adjustment Effective in CY 2015 and Subsequent Years for EPs Who Are Not Meaningful Users of Certified EHR Technology

Section 1848(a)(7) of the Act, as amended by section 4101(b) of the HITECH Act, provides for payment adjustments effective for CY 2015 and subsequent years for EPs who are not meaningful EHR users during the relevant EHR reporting period for the year. In general, beginning in 2015, if an EP is not a meaningful EHR user for any EHR reporting period for the year, then the Medicare physician fee schedule amount for covered professional services furnished by the EP during the year (including the fee schedule amount for purposes of determining a payment based on the fee schedule amount) is adjusted to equal the "applicable percent" of the fee schedule amount (defined below) that would otherwise apply. The HITECH Act includes a significant hardship exception, discussed below, which, if applicable, could exempt certain EPs from this payment adjustment. The payment adjustments do not apply to hospital-based EPs.

The term "applicable percent" means: "(I) for 2015, 99 percent (or, in the case of an EP who was subject to the application of the payment adjustment if the EP is not a successful electronic prescriber under section 1848(a)(5) for 2014, 98 percent); (II) for 2016, 98 percent; and (III) for 2017 and each subsequent year, 97 percent."

In addition, section 1848(a)(7)(iii) of the Act provides that if for 2018 and subsequent years the Secretary finds that the proportion of EPs who are meaningful EHR users is less than 75 percent, the applicable percent shall be decreased by 1 percentage point from the applicable percent in the preceding year, but in no case shall the applicable percent be less than 95 percent.

Significant Hardship Exception—section 1848(a)(7)(B) of the Act provides that the Secretary may, on a case-by-case basis, exempt an EP who is not a meaningful EHR user for the year from the application of the payment

adjustment if the Secretary determines that compliance with the requirements for being a meaningful EHR user would result in a significant hardship, such as in the case of an EP who practices in a rural area without sufficient Internet access. The exemption is subject to annual renewal, but in no case may an EP be granted a hardship exemption for more than 5 years.

Comment: Some commenters believed that when an EP's performance leads to a negative financial impact under Medicare payment policy, it would be unfair and overly punitive for them to face a separate and potentially more significant financial impact—whether through a denial of funding and/or ARRA's penalties. Further, some commenters indicated that they interpreted these requirements to mean that Medicaid participants would or would not experience fee-schedule adjustments if they are not meaningful users by the end of 2014.

Response: We will reduce payments as specified under the statute. Under sections 4101(b) and (c) of the HITECH Act, we are required to pay EPs less than 100 percent of the fee schedule and to make downward adjustments to MA-affiliated EPs for their professional services if they are not meaningful users of certified EHR beginning in CY 2015. Under sections 4102(a), (a)(2), and (c) of the HITECH Act, we are authorized to pay eligible hospitals a reduced annual payment update, provide downward payment adjustment to CAHs for cost reporting periods, and provide downward payment adjustment to MA-affiliated hospitals respectively, if they are not meaningful users of certified EHR technology beginning in FY 2015. The Medicare fee schedule adjustments will impact any EP or subsection(d) hospital that is not a meaningful user by the end of 2014. The adjustments are not authorized under Medicaid, but the adjustments will still apply to Medicaid EPs who are also Medicare EPs and also to Medicaid acute care hospitals that are also subsection(d) hospitals. We are finalizing these provisions as proposed.

2. Incentive Payments for Hospitals

a. Definition of Eligible Hospital for Medicare

Section 1886(n) of the Act, as amended by section 4102(a)(1) of the HITECH Act, provides for incentive payments, beginning in FY 2011 (that is, October 1, 2010 through September 30, 2011) for eligible hospitals that are meaningful users of certified EHR technology during the EHR reporting period for the payment year. In the proposed rule, we proposed a new § 495.104 to implement this provision. As we noted in the proposed rule, section 1886(n)(6)(B) of the Act defines "eligible hospitals" for purposes of the incentive payments provision, as "subsection (d) hospitals," referring to the definition of that term in section 1886(d)(1)(B) of the Act. Section 1886(d)(1)(B) of the Act generally defines a "subsection (d) hospital" as a "hospital located in one of the fifty States or the District of Columbia." The term therefore does not include hospitals located in the territories or hospitals located in Puerto Rico. Section 1886(d)(9)(A) of the Act separately defines a "subsection (d) Puerto Rico hospital" as a hospital that is located in Puerto Rico and that "would be a subsection (d) hospital if it were located in one of the 50 states." Therefore, because section 4102(a)(1) of the HITECH Act does not refer to "subsection (d) Puerto Rico hospitals," we proposed that incentive payments for meaningful users of certified EHR technology would not available under this provision to hospitals located in Puerto Rico. The provision does apply to inpatient, acute care hospitals located in the State of Maryland. These hospitals are not currently paid under the IPPS in accordance with a special waiver provided by section 1814(b)(3) of the Act. Despite this waiver, the Maryland hospitals continue to meet the definition of a "subsection (d) hospital" because they are hospitals located in the 50 states. Therefore we proposed that incentive payments for meaningful users of certified EHR technology would be available under this provision to acute care hospitals located in the State of Maryland. The statutory definition of a subsection (d) hospital also does not apply to hospitals and hospital units excluded from the IPPS under section 1886(d)(1)(B) of the Act, such as psychiatric, rehabilitation, long term care, children's, and cancer hospitals. We also proposed that, for purposes of this provision, we would provide incentive payments to hospitals as they are distinguished by provider number in hospital cost reports. We proposed that incentive payments for eligible hospitals would be calculated based on the provider number used for cost reporting purposes, which is the CMS Certification Number (CCN) of the main provider (also referred to as OSCAR number). Payments to eligible hospitals are made to each provider of record. The criteria for being a meaningful EHR user, and the manner for demonstrating meaningful use, are discussed in section B.2. of this final rule.

Comment: We received numerous comments on our proposal to identify all individual hospitals eligible for incentive payments based on the provider number used for cost reporting purposes (the CCN of the main provider). These commenters, including national and regional hospital associations, hospital systems, and hospitals with multiple campuses, objected to the proposed policy on various grounds. Many of these commenters pointed out that there is no standard policy that defines the specific types of facilities to which a single CCN applies. As a result, a single CCN could encompass multiple hospitals within a hospital system in some cases, while in other cases multiple hospitals within a system could have separate CCNs. These commenters therefore maintained that our proposed policy would unjustifiably lead to disparate treatment of hospital systems based solely on whether the system had one or more provider numbers. Commenters also maintained that, because the Medicare and Medicaid payment incentives are calculated using a per-hospital base amount, plus a capped per-discharge amount per hospital, identifying individual hospitals solely by CCN would result in distributing payments in a manner that does not foster widespread EHR adoption and use. The for this argument regarding limited EHR adoption and use is that multi-campus systems with a single CCN would receive only one base payment, and would be more likely to reach the discharge cap. Some commenters also argued that linking incentive payments only to a single CCN would not accurately reflect the pattern of costs required for deploying EHR systems across all sites in a hospital system. For example, even hospital sites that are part of the same system often require significant variations in their EHR systems, accommodating local policies and processes, as well as different legacy systems, physician preferences, clinical protocols, and other variables. Some commenters cited as a precedent our policy with regard to hospitals with one CCN, but multiple sites spanning more than one wage index region. CMS has instructed such hospitals to report wage data for each site separately on the cost report, and pays for discharges under the wage index that applies where the service is provided, that is, under a different wage index for each site.

These commenters recommended various approaches to recognizing and verifying the status of separate hospitals under one CCN number. Many of them

recommended that we adopt a "multi-pronged approach that allows a "hospital" to be defined in ways that acknowledge the varied organizational structures of multi-hospital systems, including by a distinct CCN, a distinct emergency department, or a distinct hospital license." Commenters recommended that we indentify and verify the distinct hospitals within hospital systems either by revising the cost report or by developing an attestation process similar to the process employed under § 413.65 of the regulations to verify provider-based status. Commenters also recommended that we either collect the data necessary for determining payment amounts (for example, discharge counts) directly from each hospital within a system with a single provider number, or develop a method of allocating discharges, bed days, and other relevant data among the hospital campuses represented in a hospital cost report under a single CCN.

Finally, a number of the commenters advocating a different approach contended that our proposed policy ran counter to the intent of the EHR incentive provision, which is to promote broader adoption of EHR systems. These commenters argued in various ways that recognizing each campus of a multi-campus hospital for separate payment was most consistent with the statute because it would provide a greater overall level of funding for EHR efforts, especially to hospital systems that have elected to enroll multiple campuses under a single Medicare provider agreement, and thus support diffusion of EHR systems more broadly. One of these commenters did, however, acknowledge that "in most circumstances the term 'subsection(d) hospital' under the Medicare Program includes all of a hospital system's inpatient facilities that operate under a single provider number," before going on to argue that CMS has both the authority and the obligation under the HITECH Act to diffuse EHR incentive payment more broadly by treating each facility under a hospital system as a separate hospital, regardless of whether any of the facilities share a single provider number.

Response: We appreciate the commenters' concerns, but we continue to believe that our proposal represents the best policy approach in determining what constitutes an "eligible hospital." In the absence of clear direction from the statute to the contrary, we believe that the most appropriate policy is to interpret the terms in subsection (d) "acute care hospital" and "children's hospital" in the light of existing Medicare and Medicaid program policies and precedents. It is quite true, as a number of the commenters noted, that hospital systems have considerable latitude (although not unlimited) in choosing whether to obtain one CCN for all their facilities, or to obtain separate CCNs for some or all of their facilities. However, once a hospital has sought and obtained a single CCN for two or more facilities, that hospital has chosen to represent itself to CMS as a single hospital, including for purposes of payment, cost reporting, and satisfying the conditions of participation. Such systems submit unified cost reports integrating data (including charges, discharges, bed days, and other relevant data) from every facility under the single CCN. For purposes of DSH and IME payments under the IPPS, both eligibility for payment and the applicable payment amounts are determined on the basis of this integrated data. Most significantly, the Medicare conditions of participation require that a system with a single CCN establish and maintain a single governing structure, medical staff, nursing staff, and record services. Section 482.2 states that a "hospital must have an organized medical staff that operates under by-laws approved by the governing body." Section 482.21(e) states that the governing body must ensure, among other matters, that "the hospital-wide quality assessment and performance improvement efforts address priorities for improved quality of care." In addition, § 482.24 states that the hospital must have "a medical record service that has administrative for medical records.". For these reasons, we believe that recognition of the decision made by each hospital or hospital to represent and organize itself as a single entity under one CCN, or as two or more distinct entities under separate CCNs is a strength, rather than a weakness, of our proposed policy. Each institution that has exercised available latitude to obtain one CCN for all their facilities not only represents itself as a single hospital, but also agrees to conduct itself in significant ways as a single hospital.

We also do not agree with those commenters who argue that our policy of applying different wage indexes to the campuses comprising a hospital system operating under a single CCN warrants our treating each campus as a separate eligible hospital for purposes of the EHR incentive payment program. Our policy for these few cases when a multi-campus hospital spans two or more wage index areas does not amount to recognizing that each campus is a separate hospital for payment purposes, but rather to accounting for the fact that, in these few cases, one hospital is located in two wage index areas. In these cases, it is appropriate to pay, and to account for wages, on the basis of where each discharge occurs rather than on the basis of where, for example, the main campus of a hospital may be located.

With regard to the disparate treatment argument advanced by a number of commenters, we acknowledge that, under our proposed policy, a single hospital system with two campuses will receive (all other things being equal) lower incentive payments than the combined incentive payments of two-single-campus hospitals with the same number of discharges. However, an equivalent disparate treatment situation would arise under the policy advocated by these commenters. Under the policy of recognizing each campus of a multi-campus system as a separate hospital, a single-campus hospital would received lower incentive payments than a multi-campus hospital with the same number of discharges, despite the fact that both hospitals have a single CCN and are recognized for administrative and financial purposes, and for purposes of the conditions of participation, as a single hospital.

Example: Hospital A is a multicampus hospital with 30,000 discharges and a Medicare share of 50 percent. Hospital A's discharges are evenly split between its two campuses. Hospital B is a single campus hospital with 30,000 discharges and a Medicare share of 50 percent. During the first year of the transition, each campus of Hospital A would receive a separate incentive payment determined on the following manner:

($2,000,000 base amount + [(15,000 − 1,149) × $200] discharge-related amount) × .5 Medicare share × 1.0 transition factor = ($2,000,000 + $2,770,200) × .5 × 1.0 = $2,385,100

Hospital A's total payment would therefore be $4,770,200. In contrast, Hospital B would receive a single payment determined in the following manner:

($2,000,000 base amount + [(23,000 − 1,149) × $200] discharge-related amount) × .5 Medicare share × 1.0 transition factor = ($2,000,000 + $4,370,200) × .5 × 1.0 = $3,185,100

Hospital B would thus receive a payment that is $1,585,100 smaller than Hospital A's total payment for the same number of discharges.

The change in policy recommended by these commenters will therefore replace one equity issue with another. We see no reason to privilege one of these arguments over the other, and

therefore we believe that the decision on a final policy ought to turn on the other considerations that we discuss.

Finally, we cannot agree with the commenters that determining the appropriate policy on this question should turn on which alternative produces the greatest overall level of spending on EHR systems. Many decisions could result in lower potential payments to some or all potential meaningful users of EHR payments. Congress deliberately chose to limit incentive payments based on the statutory formula (using the current statutory and regulatory definition of "subsection (d) hospital"), and further limited the amount of incentive payments available to large hospitals by not increasing incentive payments above 23,000 discharges.

After consideration of the public comments received, we are finalizing our policy as proposed. For purposes of this provision, we will provide incentive payments to hospitals as they are distinguished by provider number in hospital cost reports. Incentive payments for eligible hospitals will be calculated based on the provider number used for cost reporting purposes, which is the CMS Certification Number (CCN) of the main provider (also referred to as OSCAR number). Payments to eligible hospitals will be made to each provider of record.

b. Incentive Payment Calculation for Eligible Hospitals: Initial Amount

Section 1886(n)(2) of the Act, as amended by 4102(a) of the HITECH Act, describes the methodology for determining the incentive payment amount for eligible hospitals that are meaningful users of certified EHR technology during the EHR reporting period for a payment year. In general, that section requires the incentive payment for each payment year to be calculated as the product of: (1) An initial amount; (2) the Medicare share; and (3) a transition factor applicable to that payment year.

As amended by section 4201(a) of the HITECH Act, section 1886(n)(2)(A)(i) of the Act defines the initial amount as the sum of a "base amount," as defined in section 1886(n)(2)(B) of the Act, and a "discharge related amount," as defined in section 1886(n)(2)(C) of the Act. The base amount is $2,000,000, as defined in section 1886(n)(2)(B) of the Act. The term "discharge related amount" is defined in section 1886(n)(2)(C) of the Act as "the sum of the amount, estimated based upon total discharges for the eligible hospital (regardless of any source of payment) for the period, for each discharge up to the 23,000th discharge as follows:

(i) for the first through the 1,149th discharge, $0.

(ii) for the 1,150th through the 23,000th discharge, $200.

(iii) for any discharge greater than the 23,000th, $0."

In addition to the base amount, the discharge related amount provides an additional $200 for each hospital discharge during a payment year, beginning with a hospital's 1,150th discharge of the payment year, and ending with a hospital's 23,000th discharge of the payment year. No additional payment is made for discharges prior to the 1,150th discharge, or for those discharges subsequent to the 23,000th discharge. We proposed to implement the "initial amount" within the formula as that term is defined in the statute.

Comment: Several commenters requested that we identify the sources of the discharge data we plan to employ for purposes of determining the discharge related amount. These commenters also requested confirmation of their understanding that no type of discharge, regardless of source of payment, would be excluded from the discharge count for this purpose. Commenters specifically cited nursery discharges and discharges from non-PPS areas of a hospital as examples of discharges that should not be excluded under the statutory language, which they believe requires the inclusion of all patient discharges regardless of type of patient within the inpatient areas of the hospital.

Response: We cannot agree with the commenters that the statutory language includes all patient discharges within the inpatient areas of the hospital. Rather, the statutory language clearly restricts the discharges to be counted for purposes of determining the discharge-related amount to discharges from the acute care portion of the hospital. As we discussed in the proposed rule, the term "discharge related amount" is defined in section 1886(n)(2)(C) of the Act as "the sum of the amount, estimated based upon total discharges for the eligible hospital (regardless of any source of payment) for the period, for each discharge up to the 23,000th discharge as follows:

(i) for the first through the 1,149th discharge, $0.

(ii) for the 1,150th through the 23,000th discharge, $200.

(iii) for any discharge greater than the 23,000th, $0."

The phrase "total discharges for the eligible hospital (regardless of any source of payment)" limits the count of discharges to the acute care inpatient discharges. This is because of the reference to "eligible hospital." "Eligible hospital" is defined in section 1886(n)(6)(B) of the Act for purposes of the incentive payments provision, as "a subsection (d) hospital," referring in turn to the definition of that term in section 1886(d)(1)(B) of the Act. Section 1886(d)(1)(B) of the Act generally defines a "subsection (d) hospital" as a "hospital located in one of the fifty States or the District of Columbia," excluding hospitals that are not paid under the IPPS in accordance with section 1886(d)(1)(B) of the Act, such as psychiatric, rehabilitation, long term care, children's, and cancer hospitals. However, 1886(d)(1)(B) also specifies that the "term 'subsection (d) hospital * * * does not include a psychiatric or rehabilitation unit of the hospital which is a distinct part of the hospital (as defined by the Secretary)." Therefore, the term "eligible hospital" for purposes of the incentive payments provision does not extend to the excluded units of the hospital. The term does, of course, include the inpatient portion of the hospital that receives payment for Medicare purposes under the inpatient PPS. The phrase "regardless of any source of payment," however, indicates that the count of "total discharges" for this purpose should include not only patients for whom Medicare is the source of payment, but also patients for whom payment is received from Medicaid or any other source of payment. Accordingly, in the revised cost report form that is currently pending and which will be finalized in time for the 2011 payment year, CMS Form 2552–10, Hospital and Hospital Health Care Complex Cost Report, we have included a cell for entry of "Total hospital discharges as defined in section 4102 of AARA," in the new Worksheet E–1, Part II, "Calculation of Reimbursement for Settlement for HIT." This new cell is derived from line 14, from "Worksheet S–3, Part I column 15." In turn, this cell from Worksheet S–3, Part I, column 15 incorporate all discharges from the inpatient, acute care portion of the hospital, regardless of payment source. In this final rule, we have also revised the definition of "eligible hospital" in § 495.100 of the regulations, as well as the specification of "initial amount" in § 495.104(c)(3) of the regulations, in order to clarify this point.

Section 1886(n)(2)(C) of the Act, as amended by section 4102(a) of the HITECH Act, specifies that a "12-month period selected by the Secretary" may be

employed for purposes of determining the discharge related amount. While the statute specifies that the payment year is determined based on a Federal fiscal year (FY), section 1886(n)(2)(C) of the Act provides the Secretary with authority to determine the discharge related amount on the basis of discharge data from a relevant hospital cost reporting period, for use in determining the incentive payment during a FY. FYs begin on October 1 of each calendar year, and end on September 30 of the subsequent calendar year. Hospital cost reporting periods can begin with any month of a calendar year, and end on the last day of the 12th subsequent month. We proposed, for purposes of administrative simplicity and timeliness, for each eligible hospital during each incentive payment year, to use data on the hospital discharges from the hospital fiscal year that ends during the FY that is prior to the FY that serves as the payment year as the basis for making preliminary incentive payments. Similarly, we proposed that final payments would be determined at the time of settling the cost report for the hospital fiscal year that ends during the payment year, and settled on the basis of the hospital discharge data from that cost reporting period.

Example of proposal: FY 2011 begins on October 1, 2010 and ends on September 30, 2011. For an eligible hospital with a cost reporting period running from July 1, 2009 through June 30, 2010, we would employ the relevant data from the hospital's cost reporting period ending June 30, 2010 in order to determine the incentive payment for the hospital during FY 2011. This timeline would allow us to have the relevant data available for determining payments in a timely manner for the first and subsequent payment years. This timeline would also render it unnecessary to develop a cumbersome process to extract and employ discharge data across more than one hospital cost reporting period in order to determine the discharge related amount for a FY-based payment period. However, final payments would be based on hospital discharge data from the cost report ending June 30, 2011, and determined at the time of settlement for that cost reporting period.

Commenters raised several issues with regard to our proposals regarding the timing of the cost reports to be used for purposes of determining preliminary and final incentive payments. Each of these issues embraces the use of several data elements, including discharge counts, bed days, and other factors employed in the payment calculations. For purposes of simplicity, we will address these issues in general terms in this section. As we will note at several junctures below, this discussions of these issues, however, are applicable to the cost report data for other elements of the computation.

Comment: Several commenters called our attention to timing issues with regard to the cost reporting periods that we proposed to use for purposes of determining preliminary and final incentive payments. These commenters noted that, if we finalize our proposal to use data from the hospital fiscal year that ends during the FY prior to the FY that serves as the payment year as the basis for making preliminary incentive payments, hospitals with cost reporting periods on the October-to-September cycle would face a delay of two months or longer after potentially qualifying as a meaningful user before receiving a preliminary incentive payment. Specifically, for hospitals on this cycle, the cost report that would be used for determining interim payments for the first payment year (the October 1, 2009 through September 30, 2010 cost report) would not be due until February 28, 2011, two months after the hospital may have been able to qualify as a meaningful user (January 1, 2011). For hospitals on the September-to-August cycle, the delay could be one month. The commenters pointed out that over one-fifth of subsection (d) hospitals have cost reporting periods beginning on September 1 or October 1. The commenters therefore recommended that we employ discharge and other data from a hospital's most recently filed cost report as the basis for determining the hospital's preliminary incentive payment once the hospital has qualified as a meaningful user.

Response: We agree with these commenters, and in this final rule we are therefore adopting the policy that we employ discharge and other data from a hospital's most recently filed 12-month (see discussion below) cost report as the basis for determining the hospital's preliminary incentive payment once the hospital has qualified as a meaningful user. However, the precise timing of payments, especially during the first payment year, may be affected by other factors such as the timeline for implementing the requisite systems to calculate and disburse the payments. We are adopting the policy recommended by the commenters in order to avoid any unnecessary delays in making interim payments due merely to the timing of cost reporting periods.

Example: FY 2011 begins on October 1, 2010 and ends on September 30, 2011. For an eligible hospital with a cost reporting period on the October-to-September cycle, we would employ the relevant data from the hospital's most recently submitted cost reporting period in order to determine the incentive payment for the hospital during FY 2011. If the hospital qualifies for incentive payments on January 1, 2011, this would probably be the cost report for the period running from October 1, 2008 through September 30, 2009. However, we would also employ the October 1, 2009 through September 30, 2010 cost report, if that cost report is submitted before the point when preliminary incentive payments can be calculated.

Comment: A number of commenters also raised concerns about our proposal to determine final incentive payments at the time of settling the cost report for the hospital fiscal year that ends during the payment year, and to be settled on the basis of the hospital discharge and other data from that cost reporting period. These commenters pointed out that the pending CMS Form 2552–10 will not be effective in time for all hospitals and CAHs to complete the new S–10 worksheet, Hospital Uncompensated Care and Indigent Care Data, reporting charity care for their cost reporting period ending during the payment year. The effective date of the new cost report will be for cost reporting periods beginning on or after May 1, 2010 (as opposed to February 1, 2010 date anticipated in the proposed rule). For purposes of our proposal for determining final incentive payments, including the Medicare share/charity calculation, the first cost reporting period for which the new cost report will be available is the period running from May 1, 2010 through April 30, 2011. This means that, for cost reporting periods ending in FY 2011 before April 30, hospitals will not be able to complete the new S–10 worksheet to report charity care charges. Therefore, these commenters recommended that we revise our proposed policy, so that final incentive payments will be determined at the time of settlement for the cost reporting period beginning in the payment year. In this way all hospitals, regardless of their cost reporting cycle, will have adequate time to submit the revised cost reports in time for determining final incentive payments.

Response: We agree with these commenters, and in this final rule we are therefore adopting the policy that we determine final incentive payments at the time of settling the 12-month (see discussion below) cost report for the hospital fiscal year that begins after the beginning of the payment year, and to be settled on the basis of the hospital

discharge and other data from that cost reporting period.

Example: FY 2011 begins on October 1, 2010 and ends on September 30, 2011. For an eligible hospital with a cost reporting period running from July 1 through June 30, we would employ the relevant data from the hospital's cost reporting period ending June 30, 2009 in order to determine the preliminary incentive payment for the hospital during FY 2011 (or June 30, 2010, if that cost report was filed prior to the calculation). However, final payments would be based on hospital discharge data from the cost report beginning on July 1, 2011 and ending June 30, 2012, and determined at the time of settlement for that cost reporting period.

Comment: Several commenters requested that we explain how the occurrence of non-standard cost reporting periods will be taken into account in determining the appropriate cost reporting periods to employ for determining preliminary and final EHR incentive payments. Non-standard cost reporting periods run for periods shorter than the standard 12-month cost reporting periods (for example, 3 months, 6 months), and are typically employed to accommodate the circumstances of hospitals in several distinct situations, such as newly constructed hospitals, changes of ownership, and reorganization of a single multicampus hospital into multiple separate providers. In these cases, one non-standard cost reporting period may be employed before the hospital resumes (or begins) cost reporting on a 12-month cycle. One commenter recommended that we account for these situations by adopting three changes to our proposed regulations:

- For purposes of determining preliminary incentive payments, employ the most recently submitted 12-month cost reporting period that ends in the year prior to the payment year, in order to account for those situations in which the most recent cost reporting period ending prior to the payment year is a non-standard period.
- For purposes of determining final incentive payments, employ the first 12-month cost reporting period that begins after the start of the payment year, in order to account for those situations in which the cost reporting period ending during the payment year is a non-standard period.
- Provide that a hospital may address the CMS regional office responsible for its payment area for determination of the appropriate cost reporting period to employ for calculating preliminary or final incentive payment in cases that are not anticipated by the rules adopted in the final regulation.

Response: We acknowledge that we failed to address the circumstances of non-standard cost reporting periods in the proposed rule, and we agree with the commenters that it is only appropriate to do so. Non-standard cost reporting periods are not likely to be truly representative of a hospital's experience, even if methods were to be adopted for extrapolating data over a normal 12-month cost reporting period. This is because these periods are often quite short (for example, 3 months), which makes it questionable to extrapolate the data over a full cost reporting period. In addition, these abbreviated periods often capture the experience of a hospital during a period of transition (for example, change of ownership), which often renders the data highly unrepresentative. We also agree with the logic of the policy revisions proposed by the commenter cited above, subject only to the necessity of adapting the recommendations slightly to the revisions, as discussed above, we are also adopting to our proposals for identifying the cost reporting periods to be employed in determining preliminary and final EHR incentive payments.

After consideration of the public comments we receive with regard to the use of cost reporting periods for preliminary and final incentive payment determinations, we are adopting the following policies in this final rule.

- For purposes of determining preliminary incentive payments, we will employ discharge and other relevant data from a hospital's most recently submitted 12-month cost report once the hospital has qualified as a meaningful user.
- For purposes of determining final incentive payments, we will employ the first 12-month cost reporting period that begins after the start of the payment year, in order to settle payments on the basis of the hospital discharge and other data from that cost reporting period. In this final rule, we are revising section 495.104(c)(2) of the regulations accordingly. We are not adopting the recommendation to allow the CMS regional offices to make a determination about the appropriate cost reporting period in situations not anticipated by these rules because we believe that these two rules cover all possible situations. For example, even in complicated cases involving non-standard cost reporting periods, the cost reporting period for a hospital adjusts to a standard 12-month cycle within a brief period.

c. Incentive Payment Calculation for Eligible Hospitals: Medicare Share

As previously discussed, the initial amount must be multiplied by the eligible hospital's Medicare share and an applicable transition factor to determine the incentive payment to an eligible hospital for a payment year. As added by section 4102(a) of the HITECH Act, section 1886(n)(2)(D) of the Act defines the Medicare share for purposes of calculating incentive payments as a fraction based on estimated Medicare FFS and managed care inpatient bed days, divided by estimated total inpatient bed-days, modified by charges for charity care. This section specifies that the Medicare share fraction is determined for the incentive payment year "for an eligible hospital for a period selected by the Secretary." As in the case of the discharge data discussed above, this clause provides the Secretary with authority to determine the eligible hospital's Medicare share fraction on the basis of data from a relevant hospital cost reporting period, for use in determining the incentive payment during a FY. For purposes of administrative simplicity and timeliness equivalent to those discussed above with regard to discharge data, we proposed, for each eligible hospital during each payment year, to employ data on the hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care from the hospital FY that ends during the FY prior to the FY that serves as the payment year as the basis for preliminary payment. We also proposed that final payment would be made on the basis of the data from the hospital fiscal year that ends during the FY that serves as the payment year at the time of the settlement of the cost report for the latter period.

As a result of the changes we are making to these proposed policies in response to the comments discussed in the previous section, in this final rule we are adopting the following policies for employing data on the eligible hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care from the hospital in making preliminary and final EHR incentive payment determinations:

- For purposes of determining preliminary incentive payments, we will employ data on the hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care from a hospital's most recently submitted 12-month cost report once the

hospital has qualified as a meaningful user.

• For purposes of determining final incentive payments, we will employ the first 12-month cost reporting period that begins after the start of the payment year, in order to settle payments on the basis of the hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care data from that cost reporting period.

Section 1886(n)(2)(D) of the Act, as amended by section 4102 of the HITECH Act, defines the numerator and denominator of the Medicare share fraction for an eligible hospital in terms of estimated Medicare FFS and managed care inpatient bed-days, estimated total inpatient bed-days, and charges for charity care. Specifically, section 1886(n)(2)(D)(i) of the Act defines the numerator of the Medicare share fraction as the sum of—

• The estimated number of inpatient-bed-days (as established by the Secretary) which are attributable to individuals with respect to whom payment may be made under part A; and

• The estimated number of inpatient-bed-days (as so established) that are attributable to individuals who are enrolled with a MA organization under Part C.

We proposed to determine the numbers of Medicare Part A and Part C inpatient-bed-days using the same data sources and methods for counting those days that we employ in determining Medicare's share for purposes of making payments for direct graduate medical education costs, as provided under section 1886(h) of the Act and § 413.75 of our regulations. Specifically, we proposed to derive "the estimated number of inpatient-bed-days * * * attributable to individuals with respect to whom payment may be made under part A" from lines 1, 6 through 9, 10, and 14 in column 4 on Worksheet S–3, Part I of CMS Form 2552–96, Hospital and Hospital Health Care Complex Cost Report. We stated that the data entered on these lines in the cost report include all patient days attributable to Medicare inpatients, excluding those in units not paid under the IPPS and excluding nursery days.

Comment: A number of commenters pointed out an apparent contradiction between the cost report sources from which we proposed to derive the "the estimated number of inpatient-bed-days * * * attributable to individuals with respect to whom payment may be made under part A" (lines 1, 6 through 9, 10, and 14 in column 4 on Worksheet S–3, Part I of CMS Form 2552–96,), and our statement that "the data entered on these lines in the cost report include all patient days attributable to Medicare inpatients, excluding those in units not paid under the IPPS and excluding nursery days." These commenters supported our proposal to employ the data from those lines of the cost report, on the grounds that these cost report lines "adequately capture the necessary data." However, as the commenters pointed out, the data on the identified lines do include patient days in units not paid under the inpatient PPS. These commenters also contended that the relevant statutory language ("*inpatient*-bed-days * * * attributable to individuals with respect to whom payment may be made *under part A*"; emphasis supplied) would seem to include patient days in units not paid under the inpatient PPS.

Response: We agree with the commenters that our citation of the specific cost report sources from which we proposed to derive "the estimated number of inpatient-bed-days * * * attributable to individuals with respect to whom payment may be made under part A" was not consistent with our statement the data entered on these lines in the cost report include "all patient days attributable to Medicare inpatients, excluding those in units not paid under the IPPS and excluding nursery days." In this case, our error was in the specific cost report lines that we cited, rather than in our statement that the relevant statutory language ("*inpatient*-bed-days * * * attributable to individuals with respect to whom payment may be made *under part A*") includes "all patient days attributable to Medicare inpatients, excluding those in units not paid under the IPPS and excluding nursery days." As in the case which we discussed above with regard to counting "total discharges," the relevant statutory language directs that the numerator and denominator of the Medicare share fraction incorporate inpatient bed-day counts for the eligible *hospital,* and, as discussed in our section on total discharges, "eligible hospital" is defined with reference to section 1886(d)(1)(B) of the Act, which specifically excludes from the definition psychiatric or rehabilitation units that are a distinct part of the hospital. Specifically, the "Medicare share" is to be "specified * * * for an eligible hospital." The numerator of the Medicare share fraction is further defined as "the sum (* * * with respect to the eligible hospital) of—

"(I) the estimated number of inpatient-bed-days (as established by the Secretary) which are attributable to individuals with respect to whom payment may be made under part A; and

"(II) the estimated number of inpatient-bed-days (as so established) which are attributable to individuals who are enrolled with a Medicare Advantage organization under part C."

Finally, the denominator of the Medicare share fraction includes "the estimated total number of inpatient-bed-days with respect to the eligible hospital." Therefore, the inpatient-bed-day counts included in the Medicare share fraction for purposes of the incentive payments provision do not extend to inpatient-bed-days in excluded units of the hospital, but only to inpatient-bed-days in the acute care portion of the hospital that receives Medicare payment under the inpatient PPS. In this final rule, we are revising section 495.104(c)(4) of the regulations in order to clarify this point.

Since the publication of the proposed rule, we have adopted various changes to the Medicare cost report, including changes designed to accommodate the appropriate computation and final settlement of EHR incentive payments for qualifying hospitals. These changes are included in the pending cost report form, CMS Form 2552–10. In this revised form, the relevant Medicare inpatient days are entered in line 2 of the new Worksheet E–1, Part II, "Calculation of Reimbursement for Settlement for HIT." This new line is defined as the sum of lines 1 and 8 through 12, from Worksheet S–3, Part I, column 6 of CMS Form 2552–10. These lines include all patient days attributable to Medicare inpatients, excluding those in units not paid under the IPPS, and excluding nursery days.

Comment: Several commenters also contended that our proposed exclusion of nursery days from the determination of "*inpatient*-bed-days * * * attributable to individuals with respect to whom payment may be made *under part A*" is inappropriate. These commenters maintained that the statutory language is broad enough to include all inpatient days associated with Medicare eligible individuals without restriction based on the type of Part A patient.

Response: In excluding nursery days from the count of Medicare inpatient bed days, we are following the precedent of not counting such days for purposes of the direct medical education, indirect medical education, and disproportionate share adjustments under the Medicare IPPS. As in the case of the term "subsection (d)" hospital, we believe that, in the absence of clear direction from the statute to the contrary, the most appropriate policy is

to interpret terms such as "inpatient bed-days" in the light of existing Medicare program policies and precedents. Under our policies for the direct medical education, indirect medical education and disproportionate share adjustments, a bed must be permanently maintained for lodging inpatients in order to be included in available inpatient bed and inpatient bed day counts. We exclude the days provided to newborns (except for those in intensive care units of the hospital) because healthy newborn infants are not provided with an acute level of hospital care. (This is not the case with newborns assigned to intensive care units, who are included in the counts for those units.) For these reasons, nursery days are explicitly excluded from:

- The counts of Medicare inpatient hospital days and total inpatient hospital days for purposes of direct graduate medical education payments under section 413.75(b) of the regulations, where the definition of Medicare patient load reads: "Inpatient days in any distinct part of the hospital are included and nursery days are excluded."
- The counts of bed days for purposes of the Medicare indirect graduate medical education adjustment under section 412.105(b): the "count of available bed days excludes bed days associated with * * * (5) Beds or bassinets in the healthy newborn nursery * * *."
- The count of beds for purposes of the Medicare DSH adjustment under section 412.106(a)(i) of the regulations: "The number of beds in a hospital is determined in accordance with § 412.105(b)."

We note that, in addition to excluding nursery days from the numerator of the Medicare share fraction, these days are excluded for the same reasons from the count of total inpatient bed days in the denominator of the Medicare share fraction. We therefore do not believe that excluding these days would result in disadvantage to hospitals in determining their Medicare share fractions for purposes of calculating EHR incentive payments. (See our discussion of the cost report data employed to determine total inpatient bed days in the denominator of the Medicare share fraction, below.)

Comment: Other commenters maintained that swing bed days should also be included in the determination of "inpatient bed-days * * * attributable to individuals with respect to whom payment may be made under part A."

Response: Once again, as in the case of the term "subsection(d)" hospital, we believe that, in the absence of clear direction from the statute to the contrary, the most appropriate policy is to interpret terms such as "inpatient bed-days" in the light of existing Medicare program policies and precedents. We are therefore also following the precedent of Medicare payment adjustments in excluding certain swing bed days from the count of Medicare inpatient days. As in these cases, swing bed days are excluded when the swing bed is used to furnish SNF care, because only the days used for inpatient hospital care will be included in the count of "inpatient bed-days * * * attributable to individuals with respect to whom payment may be made under part A." Otherwise, we would be including non-inpatient bed-days in the count.

Comment: One commenter objected that, for purposes of the Medicare inpatient day count in the Medicare share, we appeared to be proposing to use only paid Medicare days. This commenter argued that all eligible Medicare days should be counted in order to reflect a hospital's true Medicare utilization. The commenter also maintained that the statute's reference to days "attributable to individuals with respect to whom payment may be made under part A" requires inclusion of all days when a beneficiary was eligible for Medicare, on the grounds that this language "does not require actual payment by Medicare." The commenter further noted that the other factor in the numerator of the Medicare share fraction requires inclusion of all patient days associated with individuals enrolled in a Part C Medicare Advantage plan, and maintained that there "would be no rational basis for Congress to include all enrolled Part C days, quite clearly regardless of whether they are paid, but to limit part A days to those paid by Medicare."

Response: We assume that, by the term "unpaid" Medicare days, the commenter is referring to days provided to Medicare entitled beneficiaries for which the services are non-covered, such as the cases in which a beneficiary has exhausted coverage of inpatient hospital services, or in which the services are not covered under a national or local coverage determination. We do not agree with the commenter that these days ought to be included in the count of "*inpatient*-bed-days * * * attributable to individuals with respect to whom payment may be made *under part A*." Indeed, we believe that the best reading of this statutory language suggests the opposite of what the commenter maintains: In cases of non-covered days, payment may not be made under Part A, and therefore these days should not be included in a count of days "attributable to individuals with respect to whom payment *may be* made *under part A*." We agree with the commenter that the language for the other factor in the numerator of the Medicare share fraction ("inpatient-bed-days attributable * * * to individuals who are enrolled with a MA organization under Part C") is more inclusive. However, we must assume that the difference in the statutory language is meaningful. Therefore, we are finalizing our proposal not to include days provided to Medicare entitled beneficiaries for which the services are non-covered in the count of Medicare inpatient days. It is important to note that we do include such "non-paid" days for purposes of other Medicare payment provisions, where it is appropriate to do so under the governing statutory provisions. For example, for purposes of the Medicare DSH adjustment the relevant statutory language requires inclusion of days associated with individuals who are "entitled" to benefits under Medicare Part A, rather than days for which "payment *may* be made under part A."

After consideration of these comments, we are finalizing our proposals with regard to the data to be used to determine the "inpatient bed-days * * * attributable to individuals with respect to whom payment may be made under part A" in the numerator of the Medicare share fraction. Accordingly, we will derive this information from Worksheet E–1, Part II, line 2 of the pending Medicare cost report, Form CMS–2552–10, which is defined as the sum of lines 1 and 8 through 12 in column 6, Worksheet S–3, Part I of the pending cost report. As we have just discussed, we are revising the cost report data sources from which we are deriving this information in order to be consistent with the statutory requirement. We are also revising § 495.104(c)(4)(ii)(A)(2) of the regulations to clarify this point.

Comment: One commenter inquired about the status of inpatient-bed-days attributable to individuals enrolled in the 1876 Medicare cost plan operating under "billing option 2," under which the section 1876 cost contractor pays hospitals for Part A benefits, and then claims reimbursement from CMS. The cost-contractor pays Part A benefits for its 36,000 enrolled Medicare beneficiaries to contracted hospitals in one State. The commenter maintained that a reasonable interpretation of the statutory language suggests that the inpatient bed days for these

beneficiaries should be counted in the numerator of the Medicare share fraction. The commenter requested clarification concerning the inclusion of these days in the data sources we proposed to employ, or the development of an appropriate remedy in order to ensure that they are counted. Another commenter noted that Worksheet S–3, Part I, column 4, line 2 in the Medicare cost report, CMS 2552–96, has historically been completed primarily by teaching hospitals, based on patient days reported on Provider Statistical and Reimbursement (PS&R) Report Type 118. The commenter further stated that there have been many situations in which non-teaching hospitals reporting days on this cost report line have the days removed by the Medicare fiscal intermediary or Medicare administrative contractor (MAC), as PS&R Report Type 118 contains no patient day data for non-teaching hospitals. The commenter recommended that we clarify our plans with regard to PS&R Report Type 118 and allow the form to populate with accurate data for all hospitals submitting no-pay bills for Medicare beneficiaries who are enrolled in Medicare Advantage (MA) plans and who receive Medicare-covered hospital services. The commenter further noted that, at this time, CAHs and IPPS hospitals that do not receive the DSH adjustment are not required to submit no-pay bills for Medicare Advantage patients.

Response: We agree with the commenters that all these days should be counted in the numerator of the Medicare share fraction. With respect to MA plan enrollees, these patients are already included in the "estimated number of inpatient-bed-days attributable * * * to individuals who are enrolled with a MA organization under Part C." In order for the data on the inpatient days attributable to individuals enrolled in MA plans to be included on the Medicare cost report, the hospital must submit a "no-pay" bill to the Medicare contractor. We have issued instructions clarifying that hospitals must submit no-pay bills for inpatient days attributable to individuals enrolled in MA plans. Specifically, CR 5647, dated July 20, 2007, required all hospitals paid under the inpatient prospective payment system (IPPS), inpatient rehabilitation facility prospective payment system (IRF PPS), and long term care hospital prospective payment system (LTCH PPS) to submit informational only Medicare Advantage claims. Furthermore, CR 6821, dated May 5, 2010, provided that applicable IPPS, IRF PPS and LTC hospitals will be given one final opportunity to comply with the requirement to submit FY 2007 informational only claims. In addition, these hospitals are required to attest in writing to their Medicare contractor that they have either submitted all of their Medicare Advantage claims for FY 2007 or that they have no Medicare Advantage claims for that fiscal year. After consideration of the comments, we are finalizing our proposals for determining the "inpatient bed-days * * * attributable to individuals with respect to whom payment may be made under part A" and the "estimated number of inpatient-bed-days attributable * * * to individuals who are enrolled with a MA organization under Part C." However, we are modifying the language of § 495.104(c)(4)(ii)(A)(1) regarding the counting of inpatient bed-days attributable to individuals with respect to whom payment may be under part A to clarify that this count includes days attributable to enrollees under section 1876 cost contracts where payments for Part A benefits are made by the section 1876 contractor. We intend to derive this information from Worksheet E–1, Part II, line 3 of the pending Medicare cost report, Form CMS–2552–10, which is derived from line 2 in column 6, Worksheet S–3, Part I of the pending cost report. This data source on the revised Medicare cost report is the equivalent of the source we cited in the proposed rule.

Section 1886(n)(2)(D)(ii) of the Act defines the denominator of the Medicare share fraction as the product of—

- The estimated total number of inpatient-bed-days with respect to the eligible hospital during such period; and
- The estimated total amount of the eligible hospital's charges during such period, not including any charges that are attributable to charity care (as such term is used for purposes of hospital cost reporting under Title XVIII), divided by the estimated total amount of the hospital's charges during such period.

As in the case of Medicare Part A and Part C inpatient-bed days, for purposes of determining total inpatient-bed days in the denominator of the Medicare share fraction, we proposed to use the same data sources, and the same methods, that we employ in determining Medicare's share for purposes of making payments for direct graduate medical education costs. Specifically, we proposed to derive the relevant data from lines 1, 6 through 9, 10, and 14 in column 6 on Worksheet S–3, Part I of the Medicare cost report. We noted that the data entered on these lines in the cost report include all patient days attributable to inpatients, excluding those in units not paid under the IPPS.

Comment: Several commenters noted, regarding our proposal concerning Medicare inpatient days in the denominator of the Medicare share fraction, an apparent contradiction between the cost report sources from which we proposed to derive "estimated total number of inpatient-bed-days with respect to the eligible hospital during such period" (lines 1, 6 through 9, 10, and 14 in column 6 on Worksheet S–3, Part I), and our statement that "the data entered on these lines in the cost report include all patient days attributable to inpatients, excluding those in units not paid under the IPPS ." These commenters supported our proposal to employ the data from those lines of the cost report, on the grounds that these cost report lines adequately capture the necessary data. However, as the commenters pointed out, the data on the identified lines do include patient days in units not paid under the inpatient PPS. And these commenters contended that the relevant statutory language ("the estimated total number of inpatient-bed-days with respect to the eligible hospital during such period") would seem to include patient days in units excluded from the inpatient PPS.

Response: As in the case of the equivalent issue with regard to Medicare inpatient bed days, we agree with the commenters that our citation of the specific cost report sources from which we proposed to derive the "the estimated total number of inpatient-bed-days with respect to the eligible hospital during such period" was not consistent with our statement that the data entered on these lines in the cost "include all patient days attributable to inpatients, excluding those in units not paid under the IPPS." And as in the case of Medicare inpatient-bed-days, our error was in the specific cost report lines that we cited, rather than in our statement that the relevant statutory language ("the estimated total number of inpatient-bed-days with respect to the eligible hospital") includes "all patient days attributable to inpatients, excluding those in units not paid under the IPPS.". As we have discussed in connection with counting discharges and Medicare inpatient-bed-days, the relevant statutory language directs that the denominator of the Medicare share fraction incorporate inpatient bed-day counts for the eligible hospital. Therefore, the inpatient-bed-day counts included in the Medicare share fraction for purposes of the incentive payments

provision do not extend to inpatient-bed-days in excluded units of the hospital, but only to inpatient-bed-days in the acute care portion of the hospital that receives payment for Medicare purposes under the inpatient PPS.

We are finalizing our proposal for determining the count of total inpatient-bed days in the denominator of the Medicare share fraction as including all patient days attributable to inpatients, excluding those in units not paid under the IPPS. Accordingly, we will derive this information from Worksheet E–1, Part II, line 4 of the pending Medicare cost report, Form CMS–2552–10, which is defined as the sum of lines 1and 8 through 12, in column 8, Worksheet S–3, Part I of the pending cost report. As we have just discussed, we are revising the cost report data sources from which we are deriving this information in order to be consistent with the statutory requirement. In this final rule, we are also revising § 495.104(c)(4)(ii)(B)(1) to clarify this point.

As we noted above, the denominator of the Medicare share fraction also includes the "estimated total amount of the eligible hospital's charges during such period, not including any charges that are attributable to charity care (as such term is used for purposes of hospital cost reporting under Title XVIII), divided by the estimated total amount of the hospital's charges during such period." We discuss the data sources and methods for calculating the charges and charity care portions of this formula in the next section.

d. Incentive Payment Calculation for Eligible Hospitals: Charity Care and Charges

In determining the denominator of the Medicare share fraction, we also must determine any charges that are attributable to charity care furnished by an eligible hospital or CAH. The exclusion of charges attributable to charity care has the effect of decreasing the denominator of the Medicare share fraction as the proportion of charity care (charity care charge ratio) provided by a hospital increases. This is because the ratio of estimated total hospital charges, not including charges attributable to charity care, to estimated total hospital charges during a period decreases, relatively speaking, as a hospital provides a greater proportion of charity care. The effect of a greater charity care factor on the denominator of the Medicare share fraction is therefore to decrease the denominator (as the total number of inpatient-bed days is multiplied by a relatively lower charity care charge ratio), as a hospital provides a greater proportion of charity care. A smaller denominator increases the Medicare share factor, providing for higher incentive payments, to a hospital that provides a greater proportion of charity care. Conversely, as a hospital provides a lower proportion of charity care, the ratio of estimated total hospital charges, not including charges attributable to charity care, to estimated total hospital charges during a period increases.

For the purposes of this final rule, we define charity care as part of uncompensated and indigent care described for Medicare cost reporting purposes in the Medicare cost report instructions at section 4012 of the Provider Reimbursement Manual (PRM), Part 2; Worksheet S–10; Hospital Uncompensated and Indigent Care Data. Subsection (d) hospitals and CAHs are required to complete the Worksheet S–10.

As part of the Form CMS–2552–10 described above, the revised Worksheet S–10 instructions define uncompensated care as follows: "* * * charity care and bad debt which includes non-Medicare bad debt and non-reimbursable Medicare bad debt. Uncompensated care does not include courtesy allowances or discounts given to patients." These instructions further define charity care to include health services for which a hospital demonstrates that the patient is unable to pay. Charity care results from a hospital's policy to provide all or a portion of services free of charge to patients who meet certain financial criteria. For Medicare purposes, charity care is not reimbursable, and unpaid amounts associated with charity care are not considered as an allowable Medicare bad debt. Therefore, we proposed to use the charity care charges that are reported on line 19 of the revised Worksheet S–10 in the computation of the Medicare share of the incentive payments. Line number 19 of the revised Worksheet S–10, as proposed, has changed to line number 20 based on the pending OMB approved final Form CMS–2552–10. Only the line number has changed as the instructions are the same for line 19 as proposed and for line 20 in the pending final OMB approved Worksheet S–10. Thus, the charity care charges used to calculate the final Medicare share is reported on line 20 of the pending final OMB approved Worksheet S–10.

Under section 1886(n)(2)(D) of the Act, if the Secretary determines that data are not available on charity care necessary to calculate the portion of the formula specified in clause (ii)(II) of section 1886(n)(2)(D) of the Act, the Secretary shall use data on uncompensated care and may adjust such data so as to be an appropriate proxy for charity care including a downward adjustment to eliminate bad debt data from uncompensated care data. In the absence of the data necessary for the Secretary to compute the amount described in clause (ii)(II) of section 1886(n)(2)(D) of the Act, the amount under such clause shall be deemed to be 1.

We believe that the charity care charges reported on line 20 of the pending final OMB approved Worksheet S–10 represent the most accurate measure of charity care charges as part of the hospital's overall reporting of uncompensated and indigent care for Medicare purposes. Therefore, since eligible hospitals and CAHs are required to complete the Worksheet S–10, if a hospital has not properly reported any charity care charges on line 20, we may question the accuracy of the charges used for computing the final Medicare share of the incentive payments. With appropriate resources, we believe the charity care data can be obtained by the MAC. This data would be used to determine if the hospital's charity care criteria are appropriate, if a hospital should have reported charity care charges, and if the reported charges are proper. If we determine, as based on the determination of the MAC, that the hospital did not properly report charity care charges on line 20 of the pending final OMB approved Worksheet S–10, then we proposed to deem the portion of the denominator described in section 1886(n)(2)(D)(ii)(II) of the Act to be 1.

In the proposed rule, we specifically solicited public comments on the charity care financial criteria established by each hospital and reviewed by the MACs, the collection of charity care data on the Worksheet S–10, and whether proxies for charity care may be developed with other data available to us.

Comment: Some commenters requested that CMS clarify the definition of charity care. One commenter believed the CMS incorrectly indicated that Medicare does not reimburse for charity care. The commenter believed this statement is inconsistent with section 312 of the Provider reimbursement Manual (PRM).

Response: Section 1886(n)(2)(D)(ii)(II) of the Act defines charity care charges to compute the Medicare share as such term is used for purposes of hospital cost reporting under Medicare. Thus, we are adopting our proposed definition of charity care as part of uncompensated and indigent care described for Medicare cost reporting purposes in the

Medicare cost report instructions as described above.

In addition, we believe that our statement is correct in that Medicare does not pay for charity care in accordance with the regulations and manual instructions. Specifically, section 413.89(b)(1) of the Medicare regulations defines bad debts as amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services. "Accounts receivable" and "notes receivable" are designations for claims arising from the furnishing of services, and are collectible in money in the relatively near future. Section 413.89(b)(2) of the Medicare regulations defines charity allowances as reductions in charges made by the provider of services because of the indigence or medical indigence of the patient. Cost of free care (uncompensated services) furnished under a Hill-Burton obligation are considered as charity allowances. Furthermore, section 413.89(g) states that charity allowances have no relationship to beneficiaries of the Medicare program and are not allowable costs. These charity allowances include the costs of uncompensated services furnished under a Hill-Burton obligation.

Also, section 312 of the PRM states that, for Medicare bad debt purposes, a non-Medicaid beneficiary may be considered indigent or medically indigent and that once indigence is determined and the provider concludes that no improvements in the beneficiary's financial condition exist, the debt may be deemed uncollectible without applying the collection requirements of section 310 of the PRM. We believe that the instructions at section 312 of the PRM specify bad debt amounts that may be allowable under section 413.89 of the regulations and, thus, these instructions are not related to charity care amounts that are not allowable for Medicare.

After consideration of the public comments received, we are finalizing the definition of charity care these provisions as proposed.

Comment: We received some comments asking if CMS will adopt standards to determine if a hospital's charity care policy is sufficient to qualify for the inclusion of charges in the formula for EHR and whether that same policy would suffice to meet the criteria to determine the eligibility for Medicare bad debt.

Response: Currently for bad debt purposes, section 312 of the PRM requires the provider to perform asset/income tests of patient resources for non-Medicaid beneficiaries. These tests will be used to determine if the beneficiary meets the provider's indigent policy to qualify an unpaid deductible and/or coinsurance amount as a Medicare bad debt. The provider is responsible for developing its indigent policy. Currently, the Medicare contractor will determine if the indigent policies are appropriate for determining allowable Medicare bad debt under section 312 of the PRM and § 413.89 of the regulations. We believe that the Medicare contractor will continue to determine if the provider's indigent policy for bad debt purposes is appropriate and can determine if the same policy would be sufficient to use for charity care purposes.

Comment: We received many comments on the use of charity care charge data from line 19 of the revised worksheet S–10, as proposed. Commenters urge CMS to calculate charity care costs by starting with the amount of charges a hospital has written off. Commenters noted that this modification would help streamline and unify charity care reporting across the Federal government (based on the way Internal Revenue Service (IRS)) requires charity care to be reported) ensure consistency of reporting, and avoid significantly increasing hospitals' administrative burden.

Response: As described above, we use charity care charges from line 20 of the pending final OMB approved worksheet S–10 that captures "total initial payment obligations of the patients who are given full or partial discounts, based on the hospital's charity care criteria (measured a full charge), for care delivered during the cost reporting period for the entire facility." Similar comments received on our proposed rule were also received on the Agency Information Collection Activities: Proposed Collection: Comment Request published in the July 2, 2009 **Federal Register** (74 FR 31738). CMS issued a revised package, Agency Information Collection Activities: Submission for OMB Review: Comment Request, in the April 30, 2010 **Federal Register** (75 FR 22810). The comment period for the submission for OMB review ended June 1, 2010. OMB will review the comments received and issue an approved Form CMS 2552 10. The OMB approved Form CMS–2552–10 will be effective for cost reporting periods beginning on or after May 1, 2010.

Comment: Some commenters noted that the Hospital Uncompensated Care and Indigent Care Worksheet S–10 that CMS proposed to revise in the July 2, 2009 **Federal Register** (74 FR 31738) would not be timely (based on the anticipated effective date for cost reporting periods beginning on or after February 1, 2010 as stated in the proposed rule), and therefore, hospitals with cost reporting periods beginning on November 1, 2009, December 1, 2009 or January 1, 2010 would not have the opportunity to report charity care data for the first year of the incentive payment. Commenters further highlighted their concern for available data necessary to be included in interim payments and for final payments for periods that end December 31, 2010. Commenters urged CMS to develop an interim mechanism for hospitals to report the necessary information so that no hospital receives a charity care adjustment of "1" merely because of its cost reporting cycle. Some commenters suggested that CMS use other charity care data. Some commenters suggested that CMS use the current version of the Medicare cost report, Form CMS–2552–96, to determine interim incentive payments.

Response: To calculate the Medicare share, which includes the charges for charity care, we proposed in the proposed rule to employ data from the hospitals fiscal year that ends during the FY prior to the FY that serves as the payment year as the basis for preliminary payment. We further stated that final payment would be made on the basis of the data from the hospital fiscal year that ends during the FY that serves as the payment year. After consideration of the public comments received, we are revising the provision that for purposes of determining preliminary incentive payments, we will employ data on the hospital's/CAH's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care from a hospital's/CAH's most recently submitted 12-month cost report once the hospital has qualified as a meaningful user. For purposes of determining final incentive payments, we will employ the first 12-month cost reporting period that begins after the start of the payment year, in order to settle payments on the basis of the hospital's/CAH's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care data from that cost reporting period.

In addition, as described in the proposed rule, hospitals have been required to fill out the worksheet S–10 of the Form CMS 2552–96 since the BBRA of 1999 was enacted. We recognize that the charity care data from the 2552–96 worksheet S–10 may have some limitations because, in some cases, providers failed to complete the worksheet either partially or in its

entirety. Furthermore, in the past CMS did not review the worksheet S–10 because the data had no Medicare payment implications. Thus, in the absence of availability of charity care data from the OMB approved Form CMS 2552–10, a hospital for the purposes of calculating the charity care charges in the interim may use the information from the 2552–96 worksheet S–10; line 22 until the revised worksheet is available. We believe that the Medicare contractor can make a determination if the charity care charges from the 2552–96 are appropriate, and if so, use such charges in determining the preliminary incentive payment amount for hospitals, as described above. Since CAHs were not required to fill out the 2552–96 worksheet S–10, charity care charges may not be available to determine preliminary incentive payments until the revised worksheet is available. However, using data from the first 12-month cost reporting period that begins after the start of the payment year, as described above, hospitals and CAHs will calculate the final incentive payment amount with data from the pending Form CMS–2552–10 Medicare cost report that is effective for cost reporting periods beginning on or after May 1, 2010.

Comment: Several commenters pointed out that we had failed to identify the source of the data for "estimated total amount of the eligible hospital's charges" in the proposed rule. Some of these commenters recommended that we employ Worksheet C, Column 8, line 103 for this purpose.

Response: We did neglect to identify the source of the data for "estimated total amount of the eligible hospital's charges" in the proposed rule. In the final rule, we are providing that, for this purpose, we will employ the data from Worksheet E–1, Part II, line 5 of the revised Medicare cost report, Form CMS–2552–10, which in turn derives this information from line 200 in column 8, Worksheet C, Part I of the pending cost report. We note that line 200 in column 8, Worksheet C, Part I of the revised cost report is the equivalent of 101, Column 8, Worksheet C of the current cost report. We are employing the equivalent of line 101, rather than the equivalent of line 103, as recommended by the commenters, because line 101 (current line 200) includes the charges for observation, and accordingly reflects the "total amount of the eligible hospital's charges" more truly than line 103, which excludes those charges.

e. Incentive Payment Calculation for Eligible Hospitals: Transition Factor

As we have previously discussed, the initial amount must be multiplied not only by the Medicare share fraction, but also by an applicable transition factor in order to determine the incentive payment to an eligible hospital for an incentive payment year. Section 1886(n)(2)(E)(i) of the Act designates that the applicable transition factor equals one (1) For the first payment year, three-fourths for the second payment year, one-half for the third payment year, one-fourth for the fourth payment year, and zero thereafter. However, section 1886(n)(2)(E)(ii) of the Act provides that if "the first payment year for an eligible hospital is after 2013, then the transition factor specified in this subparagraph for a payment year for such hospital is the same as the amount specified in clause (i) for such payment year for an eligible hospital for which the first payment year is 2013." Accordingly, if a hospital's first payment year is FY 2014, then the applicable transition factor equals three-fourths (¾) for the first payment year (FY 2014), one-half (½) for the second payment year (FY 2015), one-fourth (¼) for the third payment year (FY 2015), and zero thereafter. If a hospital's first payment year is FY 2015, then the applicable transition factor equals (½) for the first payment year (FY 2015), (¼) for the second payment year (FY 2016), and zero thereafter. As discussed in more detail below, under section 1886(n)(2)(E)(ii) of the Act, the transition factor for a hospital for which the first payment year is after 2015 equals zero for all years. In other words, 2015 is the last year for which eligible hospitals may begin participation in the Medicare EHR Incentive Program.

Figure 1--Incentive Payment Calculation for Subsection D Hospitals

Incentive Amount = [Initial Amount] x [Medicare Share] x [Transition Factor]

Initial Amount = $2,000,000 + [$200 per discharge for the 1,150th – 23,000th discharge]

Medicare Share = *Medicare/(Total*Charity Care) = [M/(T*C)]*
M = [# of Inpatient Bed Days for Part A Beneficiaries] + [# of Inpatient Bed Days for MA Beneficiaries]
T = [# of Total Inpatient Bed Days]
C = [Total Charges – Charges for Charity Care*]/[Total Charges]
*If data on charity care is not available, then the Secretary would use data on uncompensated care as a proxy. If the proxy data is not also available, then "*C*" would be equal to 1.

Table13: Transition Factor

Consecutive Payment Year	Transition Factor
1	1
2	¾
3	½
4	¼

f. Duration and Timing of Incentive Payments

Section 1886(n)(2)(E)(i) of the Act establishes that an eligible hospital that is a meaningful user of certified EHR technology could receive up to 4 years of financial incentive payments. The transition factor phases down the incentive payments over the 4-year period. Therefore, an eligible hospital that is a meaningful user of certified EHR technology during the relevant EHR reporting period, in payment year FY 2011, could receive incentive payments beginning with FY 2011 (transition factor equals 1), and for FY 2012 (transition factor equals ¾), 2013 (transition factor equals ½), and 2014 (transition factor equals ¼) if they continue to be a meaningful user of certified EHR technology during the relevant EHR reporting periods.

Section 1886(n)(2)(E)(ii) of the Act establishes the range of time during which a hospital may begin to receive incentive payments, and the applicable transition periods for hospitals that are permitted to begin receiving incentive payments after FY 2011. Specifically, that section provides that if the "first payment year for an eligible hospital is after 2015, the transition factor * * * for such hospital and for such year and subsequent year shall be 0." This clause in effect provides that no incentive payments will be available to a hospital that would begin to receive such payments after FY 2015. In other words, FY 2015 is the last FY in which a hospital can begin to receive incentive payments. Taken together, sections 1886(n)(2)(G)(i) and 1886(n)(2)(E)(ii) of the Act allow hospitals to begin receiving incentive payments during FYs 2011 through 2015. Section 1886(n)(2)(E)(ii) of the Act also establishes the transition periods and factors that will be in effect for hospitals that begin to receive transition payments during FY 2014 and 2015. As discussed previously, that section states that if "the first payment year for an eligible hospital is after 2013, then the transition factor specified in this subparagraph for a payment year for such hospital is the same as the amount specified in clause (i) for such payment year for an eligible hospital for which the first payment year is 2013." Section 1886(n)(2)(E)(ii) of the Act also establishes the transition periods that will be in effect for hospitals that begin to receive transition payments during FYs 2014 through 2015. That section states that if "the first payment year for an eligible hospital is after 2013, then the transition factor specified in this subparagraph for a payment year for such hospital is the same as the amount specified in clause (i) for such payment year for an eligible hospital for which the first payment year is 2013." By implication, this clause establishes that, for hospitals that begin to receive incentive payments in FYs 2012 and 2013, the transition periods are equivalent to those for hospitals that begin to receive such payments in FY 2011. An eligible hospital that is a meaningful user of certified EHR technology could receive incentive payments beginning with FY 2012 (transition factor equals 1), and for FY 2013 (transition factor equals ¾), FY 2014 (transition factor equals ½), and FY 2015 (transition factor equals ¼). Similarly, an eligible hospital that is a meaningful EHR user could receive incentive payments beginning with FY 2013 (transition factor equals 1), and for FYs 2014 (transition factor equals ¾), 2015 (transition factor equals ½), and 2016 (transition factor equals ¼).

However, this section also specifically provides that the transition factor is modified for those eligible hospitals that first become meaningful users of certified EHR technology beginning in 2014 or 2015. Such hospitals would receive payments as if they became meaningful EHR users beginning in 2013. In other words, if a hospital were to begin to demonstrate meaningful use of EHR certified technology in 2014, the transition factor used for that year (2014) would be ¾ instead of 1, ½ for the second year (2015), ¼ for the third year (2016), and zero thereafter. Similarly, if a hospital were to begin

meaningful use of certified EHR technology in 2015, the transition factor used for that year would be ½ instead of 1, ¼ for the second year (2016), and zero thereafter.

Table 25 shows the possible years an eligible hospital could receive an incentive payment and the transition factor applicable to each year.

TABLE 14: Transition Factor for Medicare FFS Eligible Hospitals

Fiscal Year	Fiscal Year that Eligible Hospital First Receives the Incentive Payment				
	2011	2012	2013	2014	2015
2011	1.00	------	------	------	------
2012	0.75	1.00	------	------	------
2013	0.50	0.75	1.00	------	------
2014	0.25	0.50	0.75	0.75	------
2015	------	0.25	0.50	0.50	0.50
2016	------	------	0.25	0.25	0.25

Comment: Several commenters pointed out an apparent inconsistency in the regulation text that we proposed to implement the transition period and applicable transition factors for EHR incentive payments. Specifically, the commenters noted that proposed section 495.104(b)(5) states that hospitals "whose first payment year is FY 2015 may receive such payments for FY 2015 through *2017*" *(emphasis supplied),* while proposed section 495.104(c)(5) states that the transition factors for hospitals "whose first payment year is FY 2015" are:

(A) ½ for FY 2015; and

(B) ¼ for FY *2016.* (Emphasis supplied.)

Response: These commenters are correct. Our proposed section 495.104(b)(5) contained a typographical error. In order to be consistent with the clear requirements of the statute, section 495.104(b)(5) should have stated that hospitals "whose first payment year is FY 2015 may receive such payments for FY 2015 through 2016." In this final rule, we are revising section 495.104(b)(5) of the final regulations accordingly.

g. Incentive Payment Adjustment Effective in FY 2015 and Subsequent Years for Eligible Hospitals Who Are Not Meaningful EHR Users

In addition to providing for incentive payments for meaningful use of EHRs during a transition period, section 1886(b)(3)(B) of the Act, as amended by section 4102(b)(1) of the HITECH Act, provides for an adjustment to the market basket update to the IPPS payment rate for those eligible hospitals that are not meaningful EHR users for the EHR reporting period for a payment year, beginning in FY 2015. Specifically, section 1886(b)(3)(B) of the Act provides that, "for FY 2015 and each subsequent FY," an eligible hospital that is not "a meaningful EHR user * * * for an EHR reporting period" will receive a reduced update to the IPPS standardized amount. This reduction will apply to "three-quarters of the percentage increase otherwise applicable." For FY 2015 and each subsequent FY, the reduction to three-quarters of the applicable update for an eligible hospital that is not a meaningful EHR user will be "33⅓ percent for FY 2015, 66⅔ percent for FY 2016, and 100 percent for FY 2017 and each subsequent FY." In other words, the Secretary is required to subject eligible hospitals who are not meaningful users to ¼, ½, and ¾ reductions of their market basket updates in FY 2015, FY 2016, and FY 2017 and subsequent years respectively. Section 4102(b)(1)(B) of the HITECH Act also provides that such "reduction shall apply only with respect to the FY involved and the Secretary shall not take into account such reduction in computing the applicable percentage increase * * * for a subsequent FY." This provision establishes a continuing incentive for hospitals to become meaningful EHR users, because a hospital that does become a meaningful EHR user in any year after the effective date of the update reduction will receive the same, fully updated standardized amount for that year, and subsequent years, as those hospitals that were already meaningful EHR users at the time when the update reduction went into effect (although hospitals would remain subject to a separate reduction for failure to report quality data under RHQDAPU). In order to conform with this new update reduction, section 4102(b)(1)(A) of the HITECH Act revises section 1886(b)(3)(B)(viii)(1) of the Act to provide that, beginning with FY 2015, the reduction to the IPPS applicable percentage increase for failure to submit data on quality measures to the Secretary shall be one-quarter of the applicable market basket update. In this way, even the combined reductions for EHR use and quality data reporting will not produce an update of less than zero for a hospital in a given FY as long as the hospital market basket remains a positive number.

In the proposed rule, we noted that specific proposals to implement these payment adjustments for subsection (d) hospitals that are not meaningful EHR users were not being made at that time, but would be subject to future rulemaking prior to the 2015 implementation date. We invited comments on these payment adjustments, and stated any comments received would be considered in developing future proposals to implement these provisions.

We received a few comments on this provision.

3. Incentive Payments for Critical Access Hospitals (CAHs)

Section 1814(l)(3)(A) of the Act, as amended by section 4102(a)(2) of the HITECH Act, also provides for incentive payments for CAHs that are meaningful users of certified EHR technology during an EHR reporting period for a cost reporting period beginning during a payment year after FY 2010 but before FY 2016. The criteria for being a meaningful EHR user, and the manner for demonstrating meaningful use, are discussed in section II.A.2. of this final rule.

a. Definition of CAHs for Medicare

Section 1861(mm)(1) of the Act defines a CAH as a facility that has been certified as a critical access hospital under section 1820(c). CAHs are reimbursed for services furnished to Medicare beneficiaries under section 1814(l) of the Act for inpatient services and section 1834(g) of the Act for outpatient services. Incentive payments for CAHs under section 1814(l)(3)(A) of the Act will be calculated based on the provider number used for cost reporting purposes, which is the CCN of the main provider. The process for making incentive payments to CAHs is discussed in section II.B.4.c. of this final rule.

Comment: We received many comments on the use of the CCN to identify CAHs. Most comments were similar to those received on the use of the CCN for determining incentive payments to eligible hospitals.

Response: We responded to the comments for eligible hospitals elsewhere in this final rule. Our responses to comments received on using the CCN to identify CAHs are the same as the responses for eligible hospital.

After consideration of the public comments received, we are finalizing our policy as proposed. For purposes of this provision, we will provide incentive payments to qualifying CAHs as they are distinguished by the provider number in the CAH's cost reports. Incentive payments for qualifying CAHs will be calculated based on the provider number used for cost reporting purposes, which is the CCN of the main provider (also referred to as OSCAR number). Payments to qualifying CAHs will be made to each provider of record.

b. Current Medicare Payment of Reasonable Cost for CAHs

For Medicare purposes, CAHs are paid for most inpatient and outpatient services to Medicare beneficiaries on the basis of reasonable cost under section 1814(l) and section 1834(g) of the Act, respectively. Thus, CAHs are not subject to the IPPS and Hospital Outpatient Prospective Payment System (OPPS).

Section 1861(v)(1)(A) of the Act is the statutory basis for reasonable cost reimbursement in Medicare. Under the reasonable cost reimbursement methodology, payments to providers are based on the reasonable cost of furnishing Medicare-covered services to beneficiaries. Reasonable cost includes all necessary and proper costs in furnishing the services, subject to the principles of reasonable cost reimbursement relating to certain specific items of revenue and cost. Reasonable cost takes into account both direct and indirect costs of providers of services, including normal standby costs. The objective of the reasonable cost methodology is to ensure that the costs for individuals covered by the program are not borne by others not so covered, and the costs for individuals not so covered are not borne by the program. The reasonable costs of services and the items to be included are determined in accordance with the regulations at 42 CFR part 413, manual guidance, and other CMS instructions.

Currently, under section 1814(l)(1) of the Act and § 413.70(a) of the regulations, effective for cost reporting periods beginning on or after January 1, 2004, payment for inpatient services of a CAH, other than services of a distinct part unit of a CAH, is 101 percent of the reasonable costs of the CAH in providing CAH services to its inpatients, as determined in accordance with section 1861(v)(1)(A) of the Act and with the applicable principles of cost reimbursement in Parts 413 and 415 of the regulations. However, payment for inpatient CAH services is not subject to the reasonable cost principles of the lesser of cost or charges, the reasonable compensation equivalent limits for physician services to providers, the ceilings on hospital operating costs, or the payment window provisions for preadmission services, specified in § 412.2(c)(5) and § 413.40(c)(2). Section 1834(g) of the Act and § 413.70(b) of the regulations describe the payment methodology for outpatient services furnished by a CAH.

Currently, reasonable cost reimbursement for CAHs includes payment for depreciation of depreciable assets used in providing covered services to beneficiaries, as described under Part 413 subpart G of our regulations and § 104 of the Medicare Provider Reimbursement Manual (PRM). In general, the depreciation expense of an asset, representing a portion of the depreciable asset's costs which is allocable to a period of operation, is determined by distributing the acquisition costs of the depreciable asset, less any salvage costs, over the estimated useful life of the asset.

c. Changes Made by the HITECH Act

Sections 4102(a)(2) and 4102(b)(2) of the HITECH Act amended section 1814(l) of the Act, which governs payment for inpatient CAH services. The HITECH Act did not amend section 1834(g) of the Act, which governs payment for outpatient CAH services.

Sections 4102(a)(2) and 4102(b)(2) of the HITECH Act amended section 1814(l) of the Act by adding new paragraphs (3), (4), and (5) as follows:

Section 1814(l)(3)(A) of the Act provides the following:

> The following rules shall apply in determining payment and reasonable costs * * * for a critical access hospital that would be a meaningful EHR user (as would be determined under paragraph (3) of section 1886(n)) for an EHR reporting period for a cost reporting period beginning during a payment year if such critical access hospital was treated as an eligible hospital under such section:
>
> (i) The Secretary shall compute reasonable costs by expensing such costs in a single payment year and not depreciating these costs over a period of years (and shall include as costs with respect to cost reporting periods beginning during a payment year costs from previous cost reporting periods to the extent they have not been fully depreciated as of the period involved).
>
> (ii) There shall be substituted for the Medicare share that would otherwise be applied [to CAHs under section 1814(l)(1),] a percent (not to exceed 100 percent) equal to the sum of—
>
> (I) The Medicare share (as would be specified under paragraph (2)(D) of section 1886(n)) for such critical access hospital if such critical access hospital was treated as an eligible hospital under such section; and
>
> (II) 20 percentage points.

Section 1814(l)(3)(B) of the Act provides that the incentive payment for CAHs will be paid "through a prompt interim payment (subject to reconciliation) after submission and review of such information (as specified by the Secretary) necessary to make such payment." The provision also states that "[i]n no case may payment under this paragraph be made with respect to a cost reporting period beginning during a payment year after 2015 and in no case may a critical access hospital receive payment under this paragraph with respect to more than 4 consecutive payment years."

Section 1814(l)(3)(C) of the Act provides that the reasonable costs for which a CAH may receive an incentive payment are costs for the purchase of certified EHR technology to which purchase depreciation (excluding interest) would otherwise apply under section 1814(l)(1) of the Act.

Section 1814(l)(4)(A) of the Act provides for an adjustment, subject to the hardship exemption in section 1814(l)(4)(C) of the Act, to a CAH's reimbursement at 101 percent of its reasonable costs if the CAH has not met the meaningful EHR user definition for an EHR reporting period that begins in FY 2015 or a subsequent fiscal year. Section 1814(l)(4)(B) of the Act specifies that if a CAH is not a meaningful EHR

user during the cost reporting period beginning in FY 2015, its reimbursement will be reduced from 101 percent of its reasonable costs to 100.66 percent. For FY 2016, the percentage of reimbursement for a CAH that is not a meaningful EHR user is reduced to 100.33 percent of its reasonable costs. For FY 2017 and each subsequent FY, the percentage of reimbursement is reduced to 100 percent of reasonable costs. Section 1814(l)(4)(C) of the Act states that, as provided for eligible subsection (d) hospitals, the Secretary may, on a case-by-case basis, exempt a CAH from this adjustment if the Secretary determines, subject to annual renewal, that requiring the CAH to be a meaningful EHR user during a cost reporting period beginning in FY 2015 or a subsequent fiscal year would result in a significant hardship, such as in the case of a CAH in a rural area without sufficient Internet access. However, in no case may a CAH be granted an exemption under this provision for more than 5 years.

Section 1814(l)(5) provides that there shall be no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of: (1) The methodology and standards for determining the amount of payment under section 1814(l)(3) of the Act and payment adjustments under section 1814(l)(4) of the Act; (2) the methodology and standards for determining a CAH to be a meaningful EHR user; (3) the methodology and standards for determining if the hardship exemption applies to a CAH; (4) the specification of EHR reporting periods; and (5) the identification of reasonable costs used to compute CAH incentive payments.

d. Incentive Payment Calculation for CAHs

Consistent with section 1814(l)(3)(A) of the Act, we proposed to amend § 413.70(a) to add a new paragraph (5) to provide for an incentive payment to a qualifying CAH for the reasonable costs incurred for the purchase of certified EHR technology in a cost reporting period beginning during a payment year after FY 2010 but before FY 2016. We proposed to include a cross-reference to § 495.106 which defines the terms associated with the CAH incentive payment, including the definition of a "qualifying CAH" that is eligible to receive the CAH incentive payment, and the methodology for determining the amount of that incentive payment. In addition, we proposed to amend § 413.70(a) to add a new paragraph (6) to provide for the adjustment of a CAH's reasonable costs of providing inpatient services starting in FY 2015 if the CAH is not a qualifying CAH.

In computing the CAH incentive payment and applying the adjustments to a CAH's payment if the CAH is not a qualifying CAH, we proposed to apply the definitions of certified EHR technology, EHR reporting period, meaningful EHR user and qualified EHR in § 495.4 that are discussed elsewhere in this final rule.

In § 495.106(a), we proposed to define a qualifying CAH as a CAH that would meet the meaningful EHR user definition for eligible hospitals in § 495.4, which is discussed in section II A.1. of this final rule if it were an eligible hospital. Also in § 495.106(a), for the purposes of computing the CAH incentive payment, we proposed that the reasonable costs for the purchase of certified EHR technology mean the reasonable acquisition costs, excluding any depreciation and interest expenses associated with the acquisition, incurred for the purchase of depreciable assets as described at part 413 subpart G, such as computers and associated hardware and software, necessary to administer certified EHR technology as defined in § 495.4 of this final rule. We also proposed to define payment year for CAHs to mean a fiscal year beginning after FY 2010 but before FY 2016.

Under proposed § 495.106(b), we specified that a qualifying CAH must receive an incentive payment for its reasonable costs incurred for the purchase of certified EHR technology. The CAH incentive payment will be for a cost reporting period that begins during a payment year after FY 2010 but before FY 2016.

Consistent with section 1814(l)(3)(A) of the Act, we proposed under § 495.106(c) that the payment methodology for computing the incentive payment for a qualifying CAH for a cost reporting period during a payment year would be equal to the product of—(1) the reasonable costs incurred for the purchase of certified EHR technology in that cost reporting period and any similarly incurred costs from previous cost reporting periods to the extent they have not been fully depreciated as of the cost reporting period involved and (2) the CAH's Medicare share which equals the Medicare share as computed for eligible hospitals including the adjustment for charity care (described in sections II.A.2.b. and A.3. of this final rule) plus 20 percentage points. However, in no case will the resulting Medicare share for a CAH exceed 100 percent. This payment methodology will be used in place of payment at 101 percent of reasonable costs typically applied under section 1814(l)(1) of the Act and § 413.70(a)(1) of the regulations.

For example, a CAH first requests an incentive payment for its cost reporting period beginning on January 1, 2012 which is in FY 2012. The CAH incurred reasonable costs of $500,000 for the purchase of certified EHR technology in its previous cost reporting period beginning on January 1, 2011. This CAH is a meaningful user of certified EHR technology during the relevant EHR reporting period and thus qualifies for an incentive payment for FY 2012. (For illustrative purposes this example assumes no salvage value of the assets acquired.) The CAH depreciated $100,000 of the costs of these items in the cost reporting period beginning on January 1, 2011. As a result, the amount used to compute the incentive payment will be the remaining $400,000 of undepreciated costs. The CAH's Medicare share is 90 percent (its Medicare share of 70 percent using the methodology described in section II.A.2.b. of this final rule plus 20 percentage points). Therefore, the CAH's incentive payment for FY 2012 is $360,000 ($400,000 times 90 percent). This CAH's first payment year is FY 2012, and it can receive incentive payments through 4 consecutive payment years which, in this example, would be FYs 2012 through 2015.

If, in the above example, the CAH also incurred reasonable costs of $300,000 for the purchase of certified EHR technology in its cost reporting period beginning in FY 2012 that will not be depreciated, then the incentive payment for FY 2012 is $630,000 ($700,000 ($400,000 in FY 2011 plus $300,000 in FY 2012) times 90 percent).

(The preceding examples are offered for illustrative purposes only and are not intended to encompass all possible computations of the CAH incentive payment.)

Under proposed § 495.106(d)(1), the amount of the incentive payment made to a qualifying CAH under this section represents the expensing and payment of the reasonable costs of certified EHR technology computed as described above in a single payment year and, as specified in § 413.70(a)(5), such payment is made in lieu of any payment that would have been made under § 413.70(a)(1) for the reasonable costs of the purchase of certified EHR technology including depreciation and interest expenses associated with the acquisition. The Medicare contractor will review the CAH's current year and each subsequent year's cost report to

ensure that the assets associated with the acquisition of certified EHR technology are expensed in a single period and that depreciation and interest expenses associated with the acquisition are not allowed.

Under proposed § 495.106(d)(2), the amount of the incentive payment made to a qualifying CAH under this section would be paid through a prompt interim payment for the applicable payment year after—(1) the CAH submits the necessary documentation, as specified by CMS or its Medicare contractor, to support the computation of the incentive payment amount; and (2) CMS or its Medicare contractor reviews such documentation and determines the interim amount of the incentive payment.

Under proposed § 495.106(d)(3), the interim incentive payment would be subject to a reconciliation process as specified by CMS and the final incentive payment as determined by CMS or its Medicare contractor would be considered payment in full for the reasonable costs incurred for the purchase of certified EHR technology in a payment year.

Under § 495.106(d)(4), we proposed that an incentive payment may be made with respect to a cost reporting period beginning during a payment year beginning with FY 2011 (October 1, 2010 through September 30, 2011) through FY 2015 (October 1, 2014 through September 30, 2015), but in no case may a CAH receive an incentive payment with respect to more than four consecutive payment years. Therefore, a CAH, that is a meaningful EHR user, may begin receiving an incentive payment for its cost reporting period beginning in FY 2011 for the incurred reasonable costs for the purchase of certified EHR technology during that cost reporting period and in previous cost reporting periods to the extent that the item or items have not been fully depreciated. These incentive payments will continue for no more than 4 consecutive payment years and will not be made for a cost reporting period beginning during a payment year after 2015. As discussed above and in section II.B.4. of this final rule, the CAH must submit supporting documentation for its incurred costs of purchasing certified EHR technology to its Medicare contractor (Fiscal Intermediary (FI)/MAC).

CAHs cannot receive an incentive payment for a cost reporting period that begins in a payment year after FY 2015. If the first payment year for a CAH is FY 2013 then the fourth consecutive payment year would be 2016. However, the CAH cannot be paid an incentive payment for FYs 2016 and beyond. For FY 2016 and beyond, payment to CAHs for the purchase of additional EHR technology will be made under § 413.70(a)(1) in accordance with the reasonable cost principles, as described above, which would include the depreciation and interest cost associated with such purchase.

Comment: We received many comments requesting CMS to provide a list of those depreciable items that would be used to determine the CAH incentive payment under this provision. The commenters were concerned that certain expenses, such as staff training, associated with an EHR system may not be included in the CAH's incentive payment. We also received comments requesting a further explanation of what documentation will be required to support the reasonable costs incurred by the CAH.

Response: Section 1814(l)(3)(C) of the Act, as amended by the HITECH Act, provides that the costs for which a CAH may receive an incentive payment are reasonable costs for the purchase of certified EHR technology to which purchase depreciation (excluding interest) would otherwise apply under section 1814(l)(1) of the Act. Furthermore, section 1814(l)(3)(A) of the Act, as amended by the HITECH Act, mandates that the Secretary shall compute reasonable costs for the purchase of certified EHR technology by expensing such costs in a single payment year and not depreciating these costs over a period of years (and shall include as costs with respect to cost reporting periods beginning during a payment year costs from previous cost reporting periods to the extent they have not been fully depreciated as of the period involved). As described in the proposed rule, for the purposes of computing the CAH incentive payment, we proposed that the reasonable costs for the purchase of certified EHR technology mean the reasonable acquisition costs, excluding any depreciation and interest expenses associated with the acquisition, incurred for the purchase of depreciable assets as described at part 413 subpart G, such as computers and associated hardware and software, necessary to administer certified EHR technology as defined in § 495.4 of this final rule.

CAHs will incur both depreciable and non-depreciable reasonable costs in a payment year that are associated with implementing and maintaining certified EHR technology. According to the statute, only the reasonable costs for the purchase of certified EHR technology to which purchase depreciation (excluding interest) would otherwise apply are to be included in the CAH incentive payment. Thus, CAHs will not have to depreciate these reasonable costs over the useful life of the EHR asset purchased as such costs will be expensed in a single payment year. Any non-depreciable reasonable costs incurred in that same single payment year that are associated with an EHR system may be paid for under the current Medicare reasonable cost payment system at 101 percent.

Currently, the CAH's Medicare contractor determines if an item purchased is a depreciable asset under Medicare principles or other accounting standards. The Medicare contractor also determines the CAH's reasonable cost for acquiring depreciable assets. For the purposes of computing the CAH incentive payment, we are not changing the Medicare contractor's current responsibilities described above. We, therefore, suggest that CAHs communicate with their Medicare contractors to determine the necessary documentation to support their reasonable costs incurred for the purchase of certified EHR technology and to determine if the items that they purchase are depreciable assets under Medicare principles or other accounting standards.

Comment: We received some comments requesting clarification of how the incentive payments will be computed if an eligible CAH converts to or from an eligible "subsection d" hospital.

Response: If during a payment year an eligible CAH is converted to or from a "subsection d" hospital, the CAH may receive an incentive payment as long as it incurred the reasonable costs of purchasing certified EHR technology in a payment year (or in a previous cost reporting period) when it was a CAH and as long as the affected providers meet the meaningful use criteria described elsewhere in this final rule. When a conversion takes place, the affected CAH and "subsection d" hospital are each required to file a Medicare cost report under section 413.24 of the regulations. For instance, if in month 6 of a cost reporting period that begins January 1, 2011 and ends December 31, 2011, a "subsection d" hospital converts to a CAH, the "subsection d" hospital will file a terminating 6-month cost report (January 1, 2011 to June 30, 2011). If the CAH retains the same year end of December 31, 2011, the CAH will file a 6-month cost report from July 1, 2011 to December 31, 2011. In this instance, the CAH's 6-month cost report would be used to determine if it incurred reasonable costs for the purchase of

certified EHR technology that may qualify for a CAH incentive payment during that period. The "subsection d" hospital's 6 month terminating cost report would be used to determine the possible amount of any incentive payment for that eligible hospital.

After consideration of the public comments received, with the exception of a few minor, technical and conforming changes, we are finalizing the applicable provisions as proposed.

Comment: We received many comments regarding the use of data from the revised Medicare cost report (Form CMS–2552–10) described in the proposed rule to compute the Medicare share portion of the CAH incentive payment. Commenters were also concerned that certain cost report data may not be available at the time of computing a CAH's incentive payment.

Response: As discussed elsewhere in this final rule, we are addressing concerns with data from the revised cost report in a final collection that is currently in the Paperwork Reduction Act clearance process. In addition, we address the timing issues with the revised cost report data elsewhere in this final rule.

e. Reduction of Reasonable Cost Payment in FY 2015 and Subsequent Years for CAHs That Are Not Meaningful EHR Users

Section 4102(b)(2) of the HITECH Act amends section 1814(l) to include an adjustment to a CAH's reimbursement at 101 percent of its reasonable costs if the CAH has not met the meaningful EHR user definition for an EHR reporting period that begins in FY 2015, FY 2016, FY 2017, and each subsequent FY thereafter. Consistent with this provision, we proposed that under § 495.106(e) and § 413.70(a)(6), if a CAH has not demonstrated meaningful use of certified EHR technology for FY 2015, its reimbursement would be reduced from 101 percent of its reasonable costs to 100.66 percent. For FY 2016, its reimbursement would be reduced to 100.33 percent of its reasonable costs. For FY 2017 and each subsequent FY, its reimbursement would be reduced to 100 percent of reasonable costs.

However, as provided for eligible hospitals, a CAH may, on a case-by-case basis, be exempted from this adjustment if CMS or its Medicare contractor determines, on an annual basis, that requiring the CAH to be a meaningful EHR user would result in a significant hardship, such as in the case of a CAH in a rural area without sufficient Internet access. However, in no case may a CAH be granted an exemption under this provision for more than 5 years.

Comment: We received some comments requesting further clarification of how CMS will be determining whether a significant hardship exists to warrant an exemption.

Response: We received a few comments on this provision which is not effective until FY 2015. We will take these comments into account when we develop proposals for implementing this provision at a later date.

After consideration of the public comments received, we are finalizing sections 495.106(e) as proposed. We have renumbered proposed section 413.70(a)(6)(iv) as 413.70(a)(7), but are otherwise finalizing section 413.70(a)(6) as proposed.

Section 1814(l)(5) of the Act exempts the determinations made under paragraphs (l)(3) and (l)(4) from administrative and judicial review. Accordingly, under § 413.70(a)(6)(iv) and § 495.106(f), we proposed that there shall be no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of the following:

- The methodology and standards for determining the amount of payment under section 1814(l)(3) of the Act and payment adjustments under section 1814(l)(4) of the Act for CAHs, including selection of periods under section 1886(n)(2) of the Act for determining, and making estimates or using proxies of, inpatient-bed-days, hospital charges, charity charges, and the Medicare share under subparagraph (D) of section 1886(n)(2) of the Act;
- The methodology and standards for determining a CAH to be a meaningful EHR user under section 1886(n)(3) of the Act as would apply if the CAH was treated as an eligible hospital under section 1886(n) of the Act;
- The methodology and standards for determining if the hardship exemption under section 1814(l)(4)(C) of the Act applies to a CAH;
- The specification of EHR reporting periods under section 1886(n)(6)(B) of the Act as applied under section 1814(l)(3) and (4) of the Act for CAHs; and
- The identification of reasonable costs used to compute the CAH incentive payment under section 1814(l)(3)(C) of the Act.

Comment: We received some comments requesting clarification of whether CAHs will be able to appeal their incentive payment amounts.

Response: We believe that the limitation of administrative and judicial review does not apply to the amount of the CAH incentive payment. The CAH may appeal the statistical and financial amounts from the Medicare cost report used to determine the CAH incentive payment. The CAH would utilize the current provider appeal process pursuant to section 1878 of the Act.

Accordingly, after consideration of the public comments received, we are finalizing § 495.106(f) as proposed. We have renumbered proposed § 413.70(a)(6)(iv) as § 413.70(a)(7), but are otherwise finalizing the provision as proposed.

4. Process for Making Incentive Payments Under the Medicare FFS Program

As previously discussed in section II.B.1. and 2. of this final rule and sections 1848(o)(1) and 1886(n)(1) of the Act, the statute provides for incentive payments to eligible professionals, eligible hospitals, and CAHS who are meaningful users of certified EHR technology as early as FY 2011 for qualifying eligible hospitals and CAHs and CY 2011 for qualifying EPs. The statute does not specify the process for making these payments to qualifying EPs and qualifying eligible hospitals and CAHs participating in the FFS Medicare incentive payment program, but instead leaves the payment process to the Secretary's discretion.

We proposed that FIs, carriers, and MACs, as appropriate, would be responsible for determining the incentive payment amounts for qualifying EPs and qualifying eligible hospitals and CAHs in accordance with the methodology set forth in section II.B.1.b. and B.2.b. of this final rule based on the previously discussed meaningful use criteria, disbursing the incentive payments to qualifying EPs and qualifying eligible hospitals and CAHs, and resolving any reconciliation issues.

a. Incentive Payments to EPs

We proposed that the carriers/MACs calculate incentive payment amounts for qualifying EPs, where incentive payments would be disbursed on a rolling basis, as soon as they ascertained that an EP demonstrated meaningful use for the applicable reporting period (that is, 90 days for the first year or a calendar year for subsequent years), and reached the threshold for maximum payment. In accordance with section 1848(l)(3)(B) of the Act, we proposed that if a qualifying EP is not eligible for the maximum incentive payment amount for the payment year and if the qualifying EP was also a qualifying MA EP, the qualifying MA organization with which the EP is affiliated would receive the incentive payment for the EP through

the MA EHR incentive program. If the qualifying EP either does not also qualify as a MA EP or he or she qualifies as a MA EP but is not eligible for the maximum incentive payment for the payment year, we proposed that the carriers/MAC would calculate the amount of the qualifying EP's incentive payment and disburse the incentive payment to the qualifying EP in the year following the payment year. The proposed rule also outlined that incentive payments would not be issued to qualifying EPs if an incentive payment was already made under the Medicaid program for the relevant payment year, and as required by section 1848(m)(2) of the Act as amended by section 4101(f) of the HITECH Act, qualifying EPs who received incentive payments from the Medicare EHR incentive payment program would not be eligible to receive an e-prescribing incentive payment. Additionally, we proposed that the incentive payments would be tracked at the qualifying EP's TIN level, and disbursed to the TIN that the qualifying EP indicated during the registration process; qualifying EPs who do not have individual TINs (that is, a qualifying EP who works solely in a group practice) would be paid at the group practice level's TIN. We proposed that qualifying EPs select one TIN for disbursement of their Medicare EHR incentive payment. Of course, after the payment is disbursed to their designated TIN, qualifying EPs may decide to allocate their incentive payment among the multiple practices in which they furnish covered professional services subject to applicable laws, regulations and rules, including, without limitation, those related to fraud, waste, and abuse.

To be clear, we note that financial relationships, including those arising from the reallocation/reassignment of incentive payments, between physicians and their employers/other entities may implicate certain fraud, waste, and abuse laws, regulations, and rules. Therefore, we proposed to include specific safeguards to limit the risk that the allocation/reassignment of incentive payments could raise under those and other applicable laws, regulations and rules. Section II.B.1.d. above finalizes our proposal at § 495.10(f) to permit EPs to reassign their incentive payments to their employer or to an entity with which they have a contractual arrangement, consistent with all rules governing reassignments including part 424, subpart F.

Comment: Several commenters expressed concern that the proposed rule contained limited information on how the incentive program for Medicare EPs will be operationalized. They requested additional information on the expected timeframe and process for payments.

Response: The HITECH Act requires that EHR incentive program payments be separately tracked and monitored because these funds cannot be commingled with other Medicare funds. Therefore, to facilitate funds control, payments will be made through a single payment contractor rather than through the carriers/MACs as was originally proposed. Additionally, the Integrated Data Repository (IDR), rather than the carriers/MACs, will be accumulating the allowed charges for each qualified EP's NPI. Payments would be made on a rolling basis, as soon as we ascertain that an EP has successfully demonstrated meaningful use for the applicable reporting period (that is, 90 days for the first year or a calendar year for subsequent years) and the EP's allowed charges has reached the threshold that qualifies an EP for maximum incentive payment, for the relevant payment year. Once this determination has been made, the National Level Repository (NLR) will calculate the EP's incentive payment. The payment will then be made by the single payment contractor. We anticipate that it will take anywhere from 15 to 46 days from the time an EP successfully attests to being a meaningful user to the time an incentive payment is made, and that for FY 2011, incentive payments will be made to EPs who successfully demonstrate that they were meaningful EHR users for the EHR reporting period (that is, 90 days) as early as May 2011. As proposed, we will pay a qualifying EP a single consolidated incentive payment for a payment year, rather than make periodic installment payments. In order to accommodate different attestation dates throughout the first year for EPs, our payment cycle is on a monthly basis as previously described; however, qualifying EPs will receive one single payment per year. In other words, CMS will issue payments as soon as possible after a qualifying EP attested to meaningfully using a certified EHR system, hence the monthly payment cycle; however, an EP will only receive one incentive payment for each year he/she qualifies. For qualifying EPs whose allowed charges for the payment year do not reach the maximum thresholds, the single payment contractor will disburse an incentive payment in the following year.

Comment: One commenter recommended CMS make semi-annual incentive payments for the second and subsequent payment years to ensure physician practices have cash flow to deploy certified EHR systems and train employees how to use the systems.

Response: When the EHR reporting period is a full year, no EPs will have successfully demonstrated that they are meaningful users at the mid-year mark. Therefore, as previously described, qualifying Medicare EPs will receive a single payment per year, issued on a monthly payment cycle. We intend to finalize this provision as proposed; there will be a single successful attestation per year and a single payment following the attestation for qualifying EPs.

Comment: One commenter questioned whether the scopes of work for the MACs/Medicare Carriers would be revised to reflect the additional work that this program will entail.

Response: As previously discussed in the first comment and response, the IDR, rather than the MACs/Medicare Carriers, will accumulate the EPs allowed charges. The MAC/Carrier work related the Medicare EHR incentive program will be within their current scope of work and will be handled through the normal change request process.

Comment: One commenter believes an EP's program selection (Medicare or Medicaid) is tied to the TIN where the EP assigns incentive payments. The commenter recommended CMS permit additional changes in program selection if EPs change their TIN. The commenter believes allowing only one program change in the life of the program is too restricting given that patient mix might change due to a practice being purchased by another TIN or an EP becoming a part-time employee of another TIN.

Response: Section II.A.5.b. of this final rule outlines our policy decision around changing program selections.

After consideration of the public comments received, we are finalizing our policy as proposed. For purposes of this provision, payments will be made through a single payment contractor with the IDR accumulating the allowed charges for each qualified EP's NPI. Payments will be made on a rolling basis, as soon as we ascertain that an EP has successfully demonstrated meaningful use for the applicable reporting period (that is, 90 days for the first year or a calendar year for subsequent years), and reached the threshold for maximum payment then the NLR will calculate the incentive payment. We estimate it will take anywhere from 15 to 46 days from the time an EP successfully attests to being a meaningful user to the time an incentive payment is made.

b. Incentive Payments to Eligible Hospitals

We proposed that the FIs/MACs would calculate incentive payments for qualifying eligible hospitals, and would disburse such payments on an interim basis once the hospital has demonstrated it is a meaningful EHR user for the EHR reporting period for the payment year. As discussed above in section B.2.b. of the final rule, the formula for calculating a qualifying eligible hospital's incentive payment requires the following data: (1) An initial amount; (2) the Medicare share; and (3) a transition factor applicable to that payment year. We proposed that FIs/MACs would use the prior-year cost report, Provider Statistical and Reimbursement (PS&R) System data, and other estimates to calculate the interim incentive payment. As discussed in section II.B.2.c. of this final rule, beginning in 2010, cost reports will capture charity care data which will be used in calculating the Medicare share of the payment. We proposed that the MACs/FIs calculate a qualifying hospital's final incentive payment using data from the cost report for the hospital's fiscal year that ends during the FY prior to the FY that serves as the payment year. We also proposed that the FIs/MACs calculate the final incentive payment using actual cost report data report for the hospital's fiscal year that ends during the FY prior to the fiscal year that serves as the payment year, and would reconcile the incentive payment as necessary at settlement of the cost report. Additionally, incentive payments for qualifying eligible hospitals would be calculated based on the provider number used for cost reporting purposes, which is the CCN of the main provider. Therefore, incentive payments for qualifying hospitals would be disbursed to the CCN rather than the TIN.

Comment: Several commenters expressed concern that the proposed rule contained limited information on how the incentive program for hospitals will be operationalized. They requested additional information on the expected timeframe and process for payments as well as requesting clarification that the incentive payments would be distributed as a "lump sum payment." One commenter requested CMS disburse one lump sum payment at the start of each eligible year for those hospitals that meet all of the meaningful use requirements.

Response: Hospital EHR incentive payments will be calculated by the FIs/MACs; however, to facilitate funds control, payments will be made through a single payment contractor. We will direct the payment contractor to issue to qualifying hospitals, that is those hospitals who successfully demonstrate that they are meaningful EHR users, a single initial payment for the year. We anticipate that payments will be made to qualifying Medicare hospitals beginning in May 2011. No payment will be made prior to an eligible Medicare hospital successfully demonstrating that it was a meaningful EHR user during the EHR period for the relevant payment year. For purposes of determining interim incentive payments, we will employ data on the hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care from a hospital's most recently submitted 12-month cost report once the hospital has qualified as a meaningful user. For purposes of determining final incentive payments, we will employ the first 12-month cost reporting period that begins after the start of the payment year, in order to settle payments on the basis of the hospital's Medicare fee-for-service and managed care inpatient bed days, total inpatient bed-days, and charges for charity care data from that cost reporting period.

Comment: One commenter requested that CMS allow hospitals to make an interim attestation 90 days after the start of the second and subsequent payment years. They suggested the interim attestation would note that they are in compliance with the meaningful use rules and intend to remain in compliance. They requested that CMS instruct the contractor to issue interim EHR payments after receipt of such attestation. The commenter believes this would cut down on the time frame of 21 months between their first and second hospital interim payments.

Response: The reporting period requirements for a hospital's second and subsequent years are 365 days. Due to the year-long reporting period, we do not believe we can allow for an interim attestation that the provider is a meaningful EHR user. Under our definitions at § 495.4, a provider is not a meaningful EHR user unless it has "for an EHR reporting period for a payment year," demonstrated meaningful use "in accordance with § 495.8 by meeting the applicable objectives and associated measures under § 495.6." Thus, we could not determine that the provider is a meaningful user at an interim point in time, and there would be no basis for providing the interim payment.

Comment: One commenter expressed confusion over the term "demonstration period" and questioned if a hospital had to complete the full demonstration period before payments would be made.

Response: We assume the commenter means EHR "reporting period" when using the phrase, "demonstration period." A hospital must demonstrate that it met the requirements for meaningful use for the full EHR reporting period for the relevant payment year before we will direct the payment contractor to issue an incentive payment to the hospital for the payment year. A hospital therefore must complete the full EHR reporting period before demonstrating that it was a meaningful EHR user and before any payments would be made.

Comment: Several commenters recommended that CMS' payment process for eligible hospitals be consistent with its payment process for EPs, and that hospital's initial incentive payment thus be distributed no later than two months after the hospital successfully demonstrates meaningful use. The same commenters requested CMS specify that the final incentive payment be issued no later than two months after the hospital submits its cost report from the FY that ends during the payment year.

Response: We anticipate that for FY 2011, interim incentive payments will be made to eligible hospitals that successfully demonstrate that they were meaningful EHR users for the EHR reporting period for FY 2011 (that is, 90 days) as early as May 2011. The exact timing of when a qualifying eligible hospital receives its interim incentive payment will depend on when the hospital successfully demonstrates that it was a meaningful EHR user; the sooner a hospital successfully demonstrate that is was a meaningful EHR user during the EHR reporting period for the payment year, the sooner it will receive its interim incentive payment. For a Medicare hospital's second and subsequent participation years, after a hospital successfully demonstrates that it was a meaningful EHR user during the EHR reporting period (that is, the federal fiscal year) for the payment year, the hospital will receive the interim incentive payment in the following year; the initial incentive payments will be made on a monthly payment cycle beginning shortly after the hospital is determined to be a meaningful user. To the commenters' point of requesting that we be consistent with the approach to paying EPs, there seems to be confusion around what was proposed as to the timing and distribution of the EP's incentive payment. The proposal for the EP's incentive payment was that EP's

accumulated allowed charges would be based on claims submitted not later than two months after the end of the payment year. The incentive payment for a qualifying EP's second and subsequent payment years was always to be disbursed in the year following the payment year. We did not propose paying an EP within two months of being deemed a meaningful user.

Comment: Several commenters questioned how CMS would treat a hospital that qualified for an incentive payment one year, but did not qualify the next or subsequent years; what is the impact on the stream of incentive payments to the hospital?

Response: An eligible hospital's first payment year is the first year they successfully demonstrate that they were a meaningful EHR user for the EHR reporting period for the payment year. Section 1886(n)(2)(G) of the Act defines the second through fifth payment years for a hospital as each successive year immediately following the first payment year for such hospital. An eligible hospital's second payment year, then, is the year following its first payment year, regardless of whether the eligible hospital qualifies for an incentive payment in the year following its first payment year. Similarly, an eligible hospital's third, fourth, and fifth payment year are the third, fourth, and fifth years, respectively, following the hospital's first payment year, even if the hospital does not receive an incentive payment for one or more of those years.

Comment: Several commenters requested that CMS clarify that EHR incentive payments for which a hospital qualifies or receives under the EHR incentive program (whether directly or pursuant to an assignment, reassignment or other transfer) shall not affect or be taken into account in the calculation or other payments made to the eligible hospital under Medicare, Medicaid, or any other state or federal healthcare program, such as disproportionate share payments, graduate medical education and indirect medical education payments, and payments for un-compensated care payments.

Response: EHR incentive payments will have no bearing on the hospital's Medicare disproportionate share, indirect medical education or direct graduate medical education payments. This discussion is also addressed in the Medicaid section at II.D.4.b.

After consideration of the public comments received, we are finalizing our policy as proposed. For purposes of this provision, Hospital incentive payments will be calculated by the FIs/MACs; however, to facilitate funds control, payments will be made through a single payment contractor. We will direct the payment contractor to issue to qualifying hospitals a single initial payment per year, and expect initial payment may begin as early as May 2011, for those who demonstrate they are meaningful EHR users at the earliest date possible. We estimate it will take anywhere from 15 to 46 days from the time a hospital successfully attests to being a meaningful user to the time an incentive payment is made.

c. Incentive Payments to CAHs

In the proposed rule, CMS proposed that because CAHs are paid on a cost reimbursement basis once a CAH incurs actual EHR costs, it could submit supporting documentation to the FI/MAC for review. The FIs/MACs would determine an incentive payment amount, as discussed in section II.A.3 of the proposed rule by substituting for the Medicare share amount that would otherwise be applied under the formula used for computing payments for eligible hospitals, a percent (not to exceed 100 percent) equal to the sum of—(1) the Medicare share for such CAH, and (2) 20 percentage points.

As discussed in the proposed rule, the FIs/MACs would reconcile the cost report and ensure the EHR expenses are adjusted on the cost report to avoid duplicate payments. Incentive payments for qualifying CAHs would be calculated based on the provider number used for cost reporting purposes, which is the CCN number of the main provider. Therefore, incentive payments for qualifying CAHs would be based on the CCN rather than the TIN.

Comment: Several commenters expressed concern that the proposed rule contained limited information on how the incentive program would be operationalized for CAHs. They requested additional information on the expected timeframe and process for payments to CAHs.

Response: To facilitate funds control, payments will be made through a single payment contractor. In order to receive a HITECH incentive payment, a CAH will have to attest that it is a meaningful user, and submit documentation to its FI/MAC to support the costs incurred for its HIT system. Once the FI/MAC reviews the documentation and the allowable amount is determined, we will direct the payment contractor to release to the CAH a single incentive payment in the next HITECH payment cycle. Payment cycles will begin in May 2011.

Comment: Several commenters requested more information on the timing of the distribution of payments to CAHs once the necessary documentation has been submitted and that recommended CMS be consistent with its proposal on incentive payments for EPs and specify that the CAH's initial incentive payment will be distributed no later than two months after it submits the necessary documentation. The same commenters requested that CMS specify that the final incentive payment be issued no later than two months after the CAH submits its cost report.

Response: CAHs will receive a single initial incentive payment per year with the initial payments beginning in May 2011. Once the FIs/MACs review the documentation and the allowable amount is determined, we will direct the payment contractor to release a single incentive payment in the next incentive payment cycle to qualifying CAHs. We anticipate the initial payments will generally be made within two months of the determination of the allowable amount. The final payment will be calculated on the cost report, and the process to settle the cost report will not be modified for these incentive payments. It will continue to follow the normal final settlement process. For the CAHs' second and subsequent participation years, CAHs will also receive a single initial incentive payment per year and a final incentive payment as described above. With respect to the commenters' request that we be consistent with the proposed approach to paying EPs, there seems to be confusion around what was proposed as to the timing and distribution of incentive payments to EPs. The proposal for EP incentive payments was that an EP's accumulated allowed charges would be based on claims submitted not later than two months after the end of the payment year. The incentive payment for a qualifying EP's second and subsequent payment years was always to be disbursed in the year following the payment year. We did not propose to make incentive payments to an EP within two months of the EP being deemed a meaningful user.

Comment: Several commenters questioned what is considered "necessary documentation" for CAHs to submit in order to receive Medicare CAH incentive payments. The same commenters requested CMS propose and obtain comments on "necessary documentation" and finalize a rule before FY 2011.

Response: The documentation submitted should include information reflecting what was purchased, and support the costs incurred. Such documentation may include invoices, receipts, or other comparable materials.

Comment: One commenter recommended CMS (not the MACs/FIs) should make all determinations regarding CAHs.

Response: The documentation review process for Medicare CAH incentive payments is similar to processes currently performed by FIs/MACs. Also, the data needed to calculate the Medicare Share is on the cost reports, which are submitted to the FIs/MACs. Accordingly, we believe it would be most appropriate for the payment determinations be made by the FIs/MACs, and not by CMS.

After consideration of the public comments received, we are finalizing our policy as proposed. For purposes of this provision, CAH payments will be calculated by the FIs/MACs; however, as discussed above, to facilitate funds control, payments will be made through a single payment contractor. Once the FIs/MACs review the documentation and the allowable amount is determined, we will direct the payment contractor to release to the CAH a single incentive payment in the next HITECH payment cycle. Payment cycles will begin in May 2011.

d. Payment Accounting Under Medicare

We will conduct selected compliance reviews of EPs, eligible hospitals, and qualified CAHs who register for the incentive programs and of recipients of incentive payments for the meaningful use of certified EHR technology. The reviews will validate provider eligibility through their meaningful use attestations including verification of meaningful use and would also review components of the payment formulas.

We will identify and recoup overpayments made under the incentive payment programs that result from incorrect or fraudulent attestations, quality measures, cost data, patient data, or any other submission required to establish eligibility or to qualify for a payment. The overpayment will be recouped by CMS or its agents from the EP, eligible hospital, MA organization, CAH, other entities to whom the right to payment has been assigned/reassigned, or, in the case of Medicaid, from the State Medicaid agencies. Medicare FFS EPs and eligible hospitals will need to maintain evidence of qualification to receive incentive payments for 10 years after the date they register for the incentive program.

5. Preclusion of Administrative and Judicial Review

We did not discuss preclusion of administrative and judicial review in our proposed rule. We are now including a discussion, in order to make the public aware of the preclusion. Also, the sections of this final rule discussing payments to Medicare Advantage (MA) organizations and CAHs both include a description of the preclusion, as well as accompanying regulation text. Therefore, while we believe statutory provisions on preclusion of review are self-implementing, below, we include a discussion of the preclusion of review that applies to EPs and eligible hospitals. We have also added regulation text to maintain consistency with the CAH and MA organization provisions.

For EPs, section 1848(o)(3)(C) of the Act prohibits administrative or judicial review under section 1869, section 1878, or otherwise, of all of the following:

- The methodology and standards for determining EP incentive payment amounts.
- The methodology and standards for determining the payment adjustments that apply to EPs beginning with 2015.
- The methodology and standards for determining whether an EP is a meaningful EHR user, including: (1) The selection of clinical quality measures; and (2) the means of demonstrating meaningful EHR use.
- The methodology and standards for determining the hardship exception to the payment adjustments.
- The methodology and standards for determining whether an EP is hospital-based.
- The specification of the EHR reporting period, as well as whether payment will be made only once, in a single consolidated payment, or in periodic installments.

For eligible hospitals, section 1886(n)(4)(A) of the Act similarly prohibits administrative or judicial review under section 1869, section 1878, or otherwise, of the following:

- The methodology and standards for determining the incentive payment amounts made to eligible hospitals, including: (1) The estimates or proxies for determining discharges, inpatient-bed-days, hospital charges, charity charges, and Medicare share; and (2) the period used to determine such estimate or proxy.
- The methodology and standards for determining the payment adjustments that apply to eligible hospitals beginning with FY 2015.
- The methodology and standards for determining whether an eligible hospital is a meaningful EHR user, including: (1) The selection of clinical quality measures; and (2) the means of demonstrating meaningful EHR use.
- The methodology and standards for determining the hardship exception to the payment adjustments.
- The specification of the EHR reporting period, as well as whether payment will be made only once, in a single consolidated payment, or in periodic installments.

We note that the above listing may summarize or abbreviate portions of the statute. For precise language on the preclusion of judicial review, readers should always refer to the statute.

C. Medicare Advantage (MA) Organization Incentive Payments

1. Definitions

a. Qualifying MA Organization

Section 1853(l)(1) of the Act, as added by section 4101(c) of the HITECH Act, provides for incentive payments to qualifying MA organizations for certain of their affiliated EPs who are meaningful users of certified EHR technology during the relevant EHR reporting period for a payment year. Section 1853(l)(5) of the Act defines the term "qualifying MA organization" as an MA organization that is organized as a health maintenance organization (HMO) as defined in section 2791(b)(3) of the PHS Act. Section 2791(b)(3) of the PHS Act in turn defines a health maintenance organization as a federally qualified HMO, an organization recognized as an HMO under State law, or a similar organization regulated for solvency under State law in the same manner and to the same extent as an HMO. Since there are few federally qualified HMOs, we expect MA organizations to primarily qualify for incentive payments as State-licensed HMOs, or as organizations regulated for solvency under State law in the same manner and to the same extent as HMOs.

In § 495.200 we proposed to define "qualifying MA organization." Specifically, in § 495.202(a)(2), we proposed to deem MA organizations offering MA HMO plans that are not federally-qualified HMOs to meet the definition of HMO in section 2791(b)(3) of the PHS Act, as HMOs recognized under State law, or as entities subject to State solvency rules in the same manner as HMOs. We believe this is reasonable because under the MA application process, State regulators are required to certify that MA organizations operating in their State are authorized to offer the type of MA plan they proposed to offer, and meet solvency standards that are adequate for these purposes. For each MA organization offering MA HMO plans, the State has thus recognized that the organization is able to assume risk

as an HMO. Therefore, we have determined that absent evidence to the contrary, an MA organization offering HMO plans is recognized by the State as a health maintenance organization, or that it is subject to State solvency standards in the same manner and to the same extent as an HMO and therefore provides sufficient assurance that the section 2791(b)(3) of the PHS Act definition is met.

In § 495.202(a)(3), for MA organizations that offer other coordinated care MA plans (Preferred Provider Organization (PPO) plans, Provider Sponsored Organization (PSO) plans, and Regional Preferred Provider Organization (RPPO) plans) and for other MA organizations offering other MA plan types (private fee-for-service (PFFS) plans, Medical Savings Account (MSA) plans), we proposed that the sponsoring MA organization would be required to attest that the MA organization is recognized under State law as an HMO, or that it is a similar organization regulated under State law for solvency in the same manner and to the same extent as an HMO before we would make a determination that the MA organization is a qualifying MA organization for purposes of incentive payments.

Although we did not receive any comments on these provisions and are finalizing them as proposed, there is one exception. In order to bring 422.202(a) into conformance with the change we are making to 422.202(b)(1), we are changing the date by which MAOs are required to identify themselves to us from the bidding deadline in June 2010 (for plan year 2011) to the bidding deadline in June 2011 (for plan year 2012).

b. Qualifying MA Eligible Professional (EP)

A qualifying MA organization may receive an incentive payment only for those EPs described under section 1853(l)(2) of the Act, as added by section 4101(c) of the HITECH Act. Section 1853(l)(2) of the Act provides that MA EPs must be "eligible professionals" as defined under section 1848(o) of the Act as added by section 4101(a) of the HITECH Act, and must either—

- Be employed by the qualifying MA organization; or
- Be employed by, or be a partner of, an entity that through contract with the qualifying MA organization furnishes at least 80 percent of the entity's Medicare patient care services to enrollees of the qualifying MA organization.

Further, the EP must furnish at least 80 percent of his or her professional services covered under Title XVIII (Medicare) to enrollees of the qualifying MA organization and must furnish, on average, at least 20 hours per week of patient care services.

As discussed in section II.A.1. of this final rule, an EP is defined as a physician (under section 1861(r) of the Act).

We said we interpreted "employed by" to mean that the EP is considered an employee of a qualifying MA organization or qualifying entity under the usual common law rules applicable in determining the employer-employee relationship under section 3121(d)(2) of the Internal Revenue Code of 1986.

We said we interpreted "to be a partner of" to mean that the qualifying MA EP has an ownership stake in the entity. Under this interpretation, a professional that contracts with an entity, but who has no ownership stake in the entity, would not be considered a qualifying MA EP.

We said we interpreted "furnishing at least 80 percent" of the entity's "patient care services" to enrollees of the organization to mean at least 80 percent of the qualifying entity's total Medicare revenue in a year (that is, total revenue from Medicare FFS as well as from all MA organizations) must be from a single qualifying MA organization.

We proposed to interpret the requirement that a qualifying MA EP furnish at least 80 percent of their professional services covered under Title XVIII to enrollees of the organization to mean that at least 80 percent of the professional's total Medicare revenue in a year (that is, total revenue from Medicare FFS as well as from all MA organizations) must be from a single qualifying MA organization. We said we believed that in establishing the rule that qualifying MA EPs need to furnish at least 80 percent of their Title XVIII covered services "to enrollees of the organization," the statute limits payment related to any specific qualifying MA EP to a single qualifying MA organization. Thus, if a qualifying MA EP provided an average of 20 hours per week of patient care services to two distinct qualifying MA organizations, we said we would pay the qualifying MA organization for the MA EP only if such a qualifying EP provided at least 80 percent of his or her professional services covered under Title XVIII to enrollees of that organization.

For purposes of determining whether a qualifying MA EP furnishes, on average, at least 20 hours per week of patient care services, we interpreted the requirement to include both Medicare and non-Medicare patient care services. Moreover, we proposed that the relevant time period for determining whether an MA EP furnishes at least 20 hours per week of patient care services should be the EHR reporting period. (We discuss the definition of EHR reporting period in section II.A.1.e. of this final rule.) Therefore, we said that over the EHR reporting period, the qualifying MA EP must provide on average 20 hours per week of patient care services. Finally, we interpreted "patient care services" to mean services that would be considered "covered professional services" under sections 1848(o)(5)(A) and (k)(3) of the Act. That is, health care services for which payment would be made under, or for which payment would be based on, the fee schedule established under Medicare Part B if they were furnished by an eligible professional to a Medicare beneficiary.

We considered various methods of determining when at least 20 hour per week, on average, of patient care services would be considered to be provided by MA EPs. We considered methods such as defining a dollar or service threshold, or the number of hours of direct patient care services actually provided. After due consideration we proposed to require qualifying MA organizations to attest to the fact that MA EPs for whom they are requesting EHR incentive payments have provided, on average, 20 hours of patient care services during the EHR reporting period.

Comment: A few commenters referenced the Report to Congress required by section 4101(d) of the HITECH Act. The commenters suggested ways in which we could combine original FFS Medicare claims-payment data and MA services provided by EPs in order to arrive at a single, combined EHR payment. One commenter asked whether payments to a provider from a Medicare Advantage plan can contribute to the volume of Allowed Charges for the purpose of calculating maximum Meaningful Use rewards, saying that he believed that they should. Another commenter said that a substantial percentage of senior citizens receive their care from EPs providing services by way of Medicare Advantage plans. The commenter continued that current proposed rules provide incentive payment only to EPs in whose practices 80 percent or more of total services are to Medicare Advantage patients. The commenter concluded that this would exclude many EPs treating our most vulnerable citizens from the opportunity to meaningfully adopt EHRs in their practices and that the 80 percent [MA] practice requirement should be eliminated. Other commenters argued

that the regulation was unclear regarding an exclusion of covered professional services of an EP not employed by an MAO when determining their participation or level of payment because those services are provided to MA beneficiaries. The commenter believed that the Secretary should provide a mechanism, whereby EPs can supplement their record to the appropriate carrier/MAC with their MA charges.

Response: We do not have statutory authority to combine payments across the FFS and MA EHR incentive payment programs. The statutory provision at section 1853(l)(3)(B) of the Act, as added by section 4101 of the HITECH, entitled "Avoiding Duplication of Payments," specifically prohibits us from making payments to EPs for both FFS and MA services. Additionally, had Congress wanted CMS to combine FFS and MA charges it could have included a provision similar to the provision in section 1886(n)(2)(D)(i) of the Act, as added by section 4102(a) of the HITECH Act, where FFS and MA inpatient-bed-days are added together to derive the numerator of the Medicare share fraction. We do not have the authority to eliminate the requirement that an EP provide 80 percent of Medicare services to enrollees of an MA organization, as that requirement is set forth in section 1853(l)(2)(A)(i)(II) of the Act, as added by the HITECH Act, which is clear in requiring that an MA EP provide "80 percent of * * * professional services * * * covered under this title to enrollees of the [MA] organization."

Comment: One commenter recommended that CMS retain its proposal regarding how the 80 percent and the 20 hours per week criteria will be met by MA EPs. Another commenter said that many EPs in Puerto Rico would not qualify for incentives under this test. The commenter said that the single MA organization requirement of 80 percent revenue and 20 hours per week for MA EPs would not be met due to the competition and market changes from year to year. The commenter suggested eliminating the single MA organization requirement. Instead, the commenter said we should change the standards to consider all enrollees of all MA organizations to which an EP furnishes services. The commenter continued by saying that if the requirements are not modified to accept multiple MA organizations, the commenter anticipated several unintended consequences in the Puerto Rico market. First, the commenter said, it would be impossible for providers to meet the single MA organization requirement of 80 percent revenue and 20 hours per week, and therefore, the standard would create disinterest in adopting EHRs in their practice. Second, the commenter said, the single MA organization requirement standard would stymie competition. An unanticipated consequence of the requirement would be providers dropping out of MA plans to consolidate revenue in order to meet the standard from a single MA organization. Third, the commenter concluded, patients would have fewer options to select among MA plans, and to a lesser degree, MA enrollees might be forced to discontinue care with long time MA providers in light of the providers' determination to consolidate revenue under a single MA organization.

Response: As noted above, the 80 percent of Medicare revenue standard is set forth in the statute, and may not be changed by regulation. The 20 hour per week rule is also statutory and based on section 1853(l)(2)(B) of the Act, as added by the HITECH Act. We note, however, that it is not the case that all 20 hours of patient care services per week be provided by an EP to MA enrollees of a single MA organization. Rather, the 20 hours of patient care services to enrollees of a single MA organization can include both Medicare and non-Medicare services and patients.

Comment: One commenter asked CMS to continue to work with Congress to develop an equitable mechanism by which to provide incentives to physicians that provide health care services through participation with more than one MAO.

Response: As previously mentioned in the preamble to this final rule, the statute clearly limits payment related to any specific MA EP to a single qualifying MA organization. Potential changes in the statute are outside the scope of this rulemaking.

After consideration of the public comments received, we are implementing the foregoing provisions as proposed.

As discussed in section II.B. of this final rule relating to Medicare FFS EPs, a qualifying MA EP is also defined as a physician under section 1861(r) of the Act. Section 1853(l)(1) of the Act, as added by section 4101(c) of the HITECH Act, provides that the provisions of sections 1848(o) and 1848(a)(7) of the Act, as amended and added by sections 4101(a) and (b) of the HITECH Act, respectively, which establish the incentive payments for EPs under Medicare FFS, apply to a qualifying MA organization's qualifying MA EPs "in a similar manner" as they apply to EPs under Medicare FFS. As discussed above in section II.A.6. of this final rule, section 1848(o)(1)(C)(i) of the Act, as added by section 4101(a) of the HITECH Act, states that hospital-based EPs are not eligible for incentive payments. Therefore, we proposed that, similar to the Medicare FFS incentive program, MA incentive payments would also not be available for hospital-based EPs. We note that the hospital where a hospital-based EP provides his or her Medicare covered services would be potentially entitled to an incentive payment either through the Medicare FFS incentive program, or through the MA-affiliated hospital EHR incentive program. Therefore, we proposed that for such a hospital-based MA EP, a qualifying MA organization would be no more entitled to an MA EP incentive payment under the MA EHR incentive program than a similarly situated EP would be entitled to an incentive payment under the Medicare FFS EHR incentive program.

Comment: We received one comment related to hospital-based MA EPs, and specifically to our proposal in the proposed rule that "similar to the Medicare FFS incentive program, MA incentive payments would also not be available for hospital-based EPs." The commenter noted, however, that unlike the proposed regulatory definition of "Qualifying Eligible Professional (EP)" under the Medicare FFS incentive program, the proposed regulatory definition of "Qualifying MA EP" under the MA EHR incentive program did not expressly exclude hospital-based EPs. The commenter went on to say that if hospital-based MA EPs are excluded from the MA EHR incentive program (for example, because they provide 90% or more of their covered services in the CY preceding the payment year in an outpatient hospital setting), unless there is an exception for MA EPs who are hospital-based in qualifying MA-Affiliated Eligible Hospitals that would not qualify for an incentive payment under the MA Affiliated hospital EHR incentive program payment criteria, Qualifying MA Organizations with MA EPs who are hospital-based in such qualifying MA-Affiliated Hospitals would not qualify for an incentive, with regard to those MA EPs, under any HITECH Act Medicare incentive program. The commenter concluded that this outcome would not be consistent with the objective of the HITECH Act to promote widespread adoption of HIT through the payment of monetary incentives for meaningful use of EHRs. The commenter recommended that if hospital-based MA EPs are excluded from the MA EHR incentive program, then we should include an exception for MA EPs who are hospital-

based in Qualifying MA-Affiliated Eligible Hospitals that would not qualify for an incentive payment (or would only qualify for a very minimal incentive payment) under the MA-Affiliated hospital EHR incentive program payment criteria.

Response: We thank the commenter for pointing out our oversight in not including the hospital-based physician exclusion in the proposed regulation text related to the MA EP EHR incentive program. We will include in regulation text the fact that an MA EP is not a "hospital-based EP," as that term is defined in § 495.4 of this final rule. As to a possible exception for hospital-based EPs who are practicing in MA-affiliated hospitals that do not qualify for incentive payments (or that qualify for very minimal incentive payments), we cannot provide such an exception. MA-affiliated eligible hospitals will receive EHR incentive payments based on the same statutory formula used to make EHR incentive payments to other "subsection (d)" hospitals—see section II.C.3. of this final rule, below. There is no statutory authority nor is there a valid reason to treat MA EPs, in this respect, any differently that other EPs that are hospital-based.

After consideration of the public comment received, we are modifying the regulation text related to the definition of MA EP by the additional of an item 5) to the definition of "Qualifying MA EP" at § 495.200 to add a specific hospital-based MA EP exclusion.

As discussed in the proposed rule, an MA EP must either be employed by the qualifying MA organization, or be employed by, or be a partner of, an entity that through contract with the qualifying MA organization furnishes at least 80 percent of the entity's Medicare patient care services to enrollees of the qualifying MA organization. With respect to the later criteria, we did not propose to define the term "entity," but instead recognized that there exist a range of entities with which MA organizations contract for patient care services, including physician groups, Independent Practice Associations (IPAs), Exclusive Provider Organizations (EPOs), Physician Hospital Organizations (PHOs), and Preferred Provider Organizations (PPOs).

Moreover, we recognized that an EP may contract with more than one such entity, and that these entities often contract with a number of MA organizations and other health care insurers. An EP also may directly contract with more than one MA organization. In general, we said, it is only when an EP is employed by a single qualifying MA organization, or is employed by or in partnership with an entity that contracts with a single qualifying MA organization, that an EP can satisfy the criteria to be an MA EP.

We said that the qualifying MA organization must attest to the fact that each MA EP is a meaningful user of certified EHR technology in accordance with § 495.4. If all of these conditions are met, such an individual is identified as an MA EP. We proposed to define the term "MA eligible professional (EP)" at § 495.200 as an EP who satisfies all of these conditions.

Finally, we discussed section 4101(d) of the HITECH Act which directed the Secretary to study and report on "nearly exclusive" physicians that primarily treat MA enrollees and that would not otherwise qualify for incentive payments under current law. We explained that this rule does not address such individuals, as it is limited to codifying in regulation existing statutory language as discussed herein.

We did not receive any comments on these provisions and are finalizing them as proposed.

c. Qualifying MA-Affiliated Eligible Hospital

We proposed to define "qualifying MA-affiliated eligible hospital" in § 495.200. A qualifying MA organization may receive an incentive payment only for a qualifying MA-affiliated eligible hospital described under section 1853(m)(2) of the Act, as added by section 4102(c) of the HITECH Act, that is a meaningful user of certified EHR technology as defined in § 495.4. Section 1853(m)(2) of the Act provides that such MA-affiliated eligible hospitals are "eligible hospitals" as defined under section 1886(n)(6) of the Act and must be under common corporate governance with a qualifying MA organization that serves individuals enrolled under MA plans offered by such organization where more than two-thirds of the Medicare hospitals discharges (or bed-days) are Medicare individuals enrolled under MA plans offered by such organization. As discussed in section II.A.1. of this final rule, section 1886(n)(6) of the Act defines an "eligible hospital" as a subsection (d) hospital (as defined under section 1886(d)(1)(B) of the Act). In § 495.200, we also proposed to define "under common corporate governance", as a qualifying MA organization and a qualifying MA-affiliated eligible hospital that have a common parent corporation, where one is a subsidiary of the other, or where the organization and the hospital have a common board of directors.

Section 1853(m)(3)(B)(i) of the Act, as added by section 4101(c) of the HITECH Act, provides that if for a payment year at least one-third (33 percent) of an MA eligible hospital's discharges (or bed-days) of Medicare patients are covered under Part A (rather than under Part C), the hospital may only receive an incentive payment under section 1886(n) of the Act—the Medicare FFS incentive program.

In § 495.200 we proposed to define "inpatient-bed-days" in the same manner as that term is defined for purposes of implementing section 4201(a) of the HITECH Act in the preamble of this final rule. The term will be used in the same way in computing incentive payments due qualifying MA organizations under the qualifying MA-affiliated eligible hospital incentive payment program.

We note that, as discussed in section II.B.2.b. of this final rule, under section 1886(n)(2)(D)(i)(II) of the Act, the portion of the Medicare FFS hospital incentive payment comprising the discharge related amount, or Medicare share, is based in part on the estimated number of inpatient-bed-days attributable to individuals enrolled in MA plans under Part C. This means that hospitals that treat individuals enrolled in MA plans will receive a Medicare FFS hospital incentive payment partially based on the number of MA-enrollee bed-days. To the extent a hospital does not meet the 33 percent threshold requiring payment through the FFS Medicare EHR hospital incentive program, incentive payments can be made to a qualifying MA organization under common corporate governance to the extent other requirements of the MA EHR hospital incentive program are met. (*See* section II.C.3 of this final rule for the computation of incentive payments to qualifying MA organizations.)

Therefore, we proposed to make EHR incentive payments to qualifying MA-affiliated eligible hospitals under the FFS EHR incentive program. Finally, we said that to the extent such data necessary to estimate the inpatient-bed-days-related incentive payment amount are not already available to us through the normal submission of hospital cost reports; we proposed to require that qualifying MA organizations seeking reimbursement for qualifying MA-affiliated eligible hospitals submit similar data.

We did not receive any comments on these provisions and are finalizing them as proposed.

2. Identification of Qualifying MA Organizations, MA EPs, and MA-Affiliated Eligible Hospitals

In § 495.202 we proposed to require an MA organization that intended to ask for reimbursement under the MA EHR incentive payment program to so indicate as part of submissions of their initial bid under section 1854(a)(1)(A) of the Act, and to attest, in some cases, that they meet the requirements of a qualifying MA organization. For MA organizations offering an MA HMO plan type, we proposed to deem such organizations to meet the definition of HMO in 42 U.S.C. 300–gg(b)(3), (that is, section 2791(b)(3) of the PHS Act). As noted previously, for MA organizations offering plan types other than HMOs, we proposed to require an attestation by the organization that the MA organization is recognized under State law as an HMO, or that it is a similar organization regulated under State law for solvency in the same manner and to the same extent as an HMO before we would make a determination that the MA organization is a qualifying MA organization for purposes of incentive payments. We proposed to require this beginning with bids due in June 2010 (for plan year 2011) for MA organizations seeking reimbursement for MA EPs and MA-affiliated eligible hospitals.

We also proposed requiring qualifying MA organizations, as part of their initial bids starting with plan year 2011, to make a preliminary identification of potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals for which the organizations would seek EHR incentive payments.

In developing the preliminary and final lists of potentially qualifying MA EPs, qualifying MA organizations, we said that qualifying MA organizations must exclude hospital-based MA EPs. We proposed that qualifying MA organizations identify hospital-based MA EPs using the same criteria outlined in section II.A.6 of this final rule for identifying hospital-based EPs in the Medicare FFS EHR incentive program.

Along with both the preliminary and final lists of potentially qualifying MA EPs and MA-affiliated hospitals, we said that qualifying MA organizations would be required to submit an attestation that these professionals and hospitals meet the criteria to be considered eligible. For example, for hospitals, the qualifying MA organization would need to attest that they are under common corporate governance with the qualifying MA organization and for EPs, the qualifying MA organization would need to attest that the list does not include any hospital-based EPs.

We proposed requiring qualifying MA organizations to provide final identification of potentially qualifying MA EPs by the end of the MA EP payment year (December 31), and final identification of potentially qualifying MA-affiliated eligible hospitals by the end of the MA-affiliated hospital payment year (the FFY ending on September 30), for which MA EHR incentive payments were sought. We also proposed requiring qualifying MA organizations to report the name, practice address, and other identifying information, like NPI, for all physicians that meet the requirements of a qualifying MA EP for which the qualifying MA organization would be requesting payment under the MA EHR incentive payment program.

We said that once a qualifying MA organization identifies potential EPs, we are required to ensure that such EPs did not receive the maximum EHR incentive payment for the relevant payment year under the Medicare FFS program under section 1848(o)(1)(A) of the Act, as added by section 4101(a) of the HITECH Act, before releasing an incentive payment to a qualifying MA organization related to such EP. (See section 1853(l)(3)(B)(i) of the Act, as added by section 4101(c) of the HITECH Act). Therefore, in order to allow us time to determine whether an MA EP received the maximum EHR incentive payment under the Medicare FFS program, we proposed not to make incentive payments to qualifying MA organizations for the MA EPs for a payment year until after the final computation of EP incentive payments for that year under the Medicare FFS program. Additionally, we proposed to require qualifying MA organizations to ensure that all MA EPs are enumerated through the NPI system, in order to detect and prevent duplicate payment for EPs under both the FFS and MA EHR incentive payment programs.

Comment: Two commenters contended that requiring MA organizations to provide even a preliminary list of MA EPs by June 2010 (for payment year 2011) would be unrealistic and burdensome, especially when publication of a Final Rule seems unlikely before May 2010 at the earliest. For 2011, any preliminary list will be inaccurate, despite good faith efforts and reasonable due diligence. Moreover, CMS has not stated any justifiable purpose for requiring such a preliminary list.

Response: We agree with the commenters that it would be unnecessarily burdensome and unrealistic to require MA organizations to provide preliminary lists as early as June of 2010 of potential MA EPs for incentive payment year 2011. We will change the timing of this requirement in § 495.202(b)(1) to say that as part of initial bids for plan year 2012 MA organizations will be required to submit preliminary lists in June of 2011 (when bids are due for 2012) of potential MA EPs for incentive payment year 2011. Thus, we will delay the requirement for a full year. The purpose of such preliminary lists is to identify potential MA EPs that have, for instance, registered as FFS Medicare or Medicaid EPs on the National Level Repository. The intent of getting these lists before payment is due, or before a final determination of eligibility can be made, is to help qualifying MA organizations know of any potential conflicts in time to "cure" them before final payment determinations are made.

Comment: One commenter objected to CMS' proposal that MA organizations be required to submit final lists of MA EPs and MA hospitals by the last day of the payment year, including the attestations of meaningful use and accurate payment calculation. The commenter argued that this timing would not allow sufficient time to ensure that data are complete and accurate, especially considering that MA organizations bear the additional burden of having to develop and support internal administrative systems to determine eligibility and to calculate payment (we will calculate FFS EP payments based on claims submitted). The commenter recommended that we extend the deadlines to produce both preliminary and final lists of MA EPs and hospitals. The commenter suggested that MA organizations be given until 90 to 120 days after the close of the payment year to identify and list eligible EPs and hospitals (for example, after 31 December 2011 for plan year 2011).

Response: We agree with the commenter that additional time should be permitted and we are therefore adding a due date in § 495.202(b)(3) for final identification of potentially qualifying MA EPs and MA-affiliated eligible hospitals of 60 days after the close of the payment year. We believe 60 days is reasonable, since it is the same as the time in which FFS EPs have to submit claims for consideration under the Medicare FFS EHR incentive payment program.

After consideration of the public comments received, we are modifying the regulation text related to the timing of both preliminary and final identification of MA EPs and MA-affiliated eligible hospitals. Preliminary

identification of MA EPs and MA-affiliated hospitals for payment year 2011 will need to occur by the bidding deadline in June 2011, and final identification will need to occur within 60 days of the close of the payment year. Accordingly, we are respectively modifying the regulation text at § 495.202(b)(1) and § 495.202(b)(3). We are also modifying the regulation text at § 495.204(b)(2) to be consistent with the change to § 495.202(b)(3), since final identification in § 495.202(b)(3) should occur at the same time as final revenue reporting under § 495.204(b)(2), so calculations of payments due under the MA EP incentive payment program can be finalized. We are also modifying the regulation text at § 495.210(b) and (c) to be consistent with the changes to § 495.204(b)(2) and § 495.202(b)(3), since the deadline for attestations of meaningful use should be consistent with deadlines for revenue reporting for MA EPs, and final identification of MA EPs and MA-affiliated hospitals. Finally, as noted (above) in our discussion of the definition of qualifying MA organizations, we are modifying the date in § 495.202(a)(1) by which MAOs are required to identify themselves to us from the bidding deadline in June 2010 (for plan year 2011) to the bidding deadline in June 2011 (for plan year 2012).

We also proposed to require all qualifying MA organizations to self-report and identify themselves, regardless of whether they have qualifying MA EPs or MA-affiliated eligible hospitals for whom or which the organization plans to claim incentive payments at the time the initial bid is due (the first Monday of June, see section 1854(a)(1)(A) of the Act) beginning in 2014 for bids related to plan year 2015. We proposed to require this reporting by all qualifying MA organizations in years beginning with 2014 in anticipation of the statutory requirement in sections 1853(l)(4) and 1853(m)(4) of the Act, to negatively adjust our capitation payments to qualifying MA organizations for MA EPs and MA-affiliated eligible hospitals that are not meaningful users of certified EHR technology for years beginning with 2015.

We did not receive any comments on these provisions and are finalizing them as proposed.

3. Computation of Incentives to Qualifying MA Organizations for MA EPs and Hospitals

In § 495.204, we proposed a methodology under which payments to qualifying MA organizations for qualifying MA EPs will be computed. Section 1853(l)(3)(A) of the Act provides that in applying section 1848(o), instead of the additional payment amount specified under section 1848(o)(1)(A) of the Act, the Secretary may substitute an amount determined by the Secretary, to the extent feasible and practical, to be similar to the estimated amount in the aggregate that would be payable under, or would be based on, the Medicare physician fee schedule under Part B instead of Part C. Section II.B.1. of this final rule discusses these provisions.

Section 1853(m)(3)(A) of the Act provides that, in providing an incentive payment to qualifying MA organizations for MA-affiliated hospitals, we substitute for the amount specified under section 1886(n)(2) of the Act—the incentive payment amount under Medicare FFS for qualifying eligible hospitals—an amount determined by the Secretary to be similar to the estimated amount in the aggregate that would be payable if payment for services furnished by such hospitals was payable under Part A instead of Part C. (For more detailed information see section II.B.2. of this final rule.)

Sections 1848(o)(1)(D)(i) and 1886(n)(2)(F) of the Act permit us to make incentive payments for a year in installments, although we proposed to make a single lump sum payment with respect to MA EPs. With respect to MA EP incentive payments, we said we read the term "aggregate" to mean the aggregate installment payments made by us under the FFS EHR incentive program to a qualifying EP over the course of the relevant payment year.

The duplicate payment provisions in section 1853(l)(3)(B)(i)(II) of the Act direct us to make payment for EPs "only under" the MA EHR incentive program "and not under" the Medicare FFS EHR incentive program to the extent any EP earned "less than [the] maximum incentive payment for the same period" under the Medicare FFS EHR incentive program. We noted in the proposed rule that section 1853(l)(1) of the Act provides that section 1848(o) of the Act applies in a "similar," but not the same, manner to qualifying MA organizations as it applies to EPs under Part B. The Medicare FFS incentive payment program under section 1848(o) does not include payment for professional services provided to MA enrollees, but rather only for services paid under Part B. In a similar manner we proposed to limit payment to an MA organization to only payment for their EPs' services to MA enrollees of plans offered by the MA organization. We said we did not believe it would be appropriate to provide an incentive payment to an MA organization for services provided to individuals covered under Part B. Therefore, we proposed, that in calculating qualifying MA EP incentive payments, we would only consider covered professional services provided to enrollees of MA plans offered by qualifying MA organizations and would not include in the calculation any services reimbursed by Medicare FFS.

Comment: Many commenters asked if MA plan beneficiaries and services would be counted in the calculation of FFS EHR incentives and, if so, if it would require separate submissions to each MA plan in the local market.

Response: As we explained in the preamble of the proposed rule, we cannot make MA EP incentive payments for Part B services covered and paid for on a fee-for-service basis under the original Medicare program. We also cannot make MA EP incentive payments to entities other than qualifying MAOs. In short, the Medicare Advantage services provided by EPs that are not qualifying MA EPs—defined in statute and in this rule at § 495.200—are not reimbursable under the EHR incentive payment program.

Comment: Two commenters contended that the proposed Medicare Advantage incentive computation was inconsistent. They said that sections II.C.3. through 5. of this final rule discuss compensation, but the preamble says that the Secretary may substitute a different amount. This discrepancy should be clarified.

Response: We disagree. The statute says that we can substitute an amount "that is similar to the estimated amount that would be payable or based on the fee schedule." It does not say that we can substitute a different amount.

After consideration of the public comments received, we are implementing these provisions as proposed.

We also said that under the Medicare FFS EHR incentive program, an EP's incentive payment could not exceed the annual limits specified under section 1848(o)(1)(B)(i) of the Act. We proposed that similar payment limits apply to qualifying MA organizations for their qualifying MA EPs. Specifically, section 1848(o)(1)(B) of the Act provides that the incentive payment for an EP for a given year shall not exceed the following amounts:

- For the EP's first payment year, $15,000 (or, if the first payment year is 2011 or 2012, $18,000).
- For the EP's second payment year, $12,000.
- For the EP's third payment year, $8,000.
- For the EP's fourth payment year, $4,000.

- For the EP's fifth payment year, $2,000.
- For any succeeding year, $0.

Note that, similar to the Medicare FFS EHR incentive program, there will be no incentive payments made with respect to a year after 2016. We proposed similar restrictions related to qualifying MA organizations. So, the maximum cumulative incentive payment over 5 years to a qualifying MA organization for each of its qualifying MA EPs that meaningfully use certified EHRs beginning on or before 2012 would be $44,000 per qualifying MA EP. For qualifying MA organizations first reporting the meaningful use of certified EHRs by qualifying MA EPs after 2014, there is no incentive payment amount available. Subject to an exception discussed below, for MA organizations first reporting the meaningful use of certified EHRs by qualifying MA EPs in 2013 or 2014, the maximum potential incentive payment per qualifying EP is, respectively, $39,000 over 4 years, and $24,000 over 3 years.

We did not receive any comments on these provisions and are finalizing them as proposed.

We proposed to make MA EP incentive payments to qualifying MA organizations on the same payment cycle for all employed/partnering qualifying EPs of the organization. In other words, all MA EPs of a specific qualifying MA organization will be in the same payment year with respect to the amount of the incentive payment per qualifying EP that we will make. So, for instance, if a qualifying MA organization is in its second payment year in 2013 and it hires a new EP for which the qualifying MA organization had not previously received an EHR incentive payment, we will nevertheless make a second year incentive payment (up to $12,000 in 2013) with respect to such an MA EP—assuming all other conditions are met. Thus, the limits on MA EP incentive payments discussed above are applied to the qualifying MA organization's entire MA EP population in any specific payment year relative to that MA organization, regardless of the length of employment/partnership of/between that specific MA EP and that specific qualifying MA organization.

Under section 1848(o)(1)(B)(iv) of the Act, the annual incentive payment limit for EPs who predominantly furnish Part B services in a geographic health professional shortage area (HPSA) is increased by 10 percent. While we do not anticipate that MA EPs would generally practice in a HPSA area, to the extent that an MA EP practices in an area where he or she would be entitled to the 10 percent increase, that amount would apply to MA EPs as well.

We did not receive any comments on these provisions and are finalizing them as proposed.

We explored various ways of computing the EP-level incentive payments due qualifying MA organizations whose qualifying MA EPs meaningfully use certified EHR technology. One option that we considered was using MA plan bidding and payment data to estimate average annual MA revenue for qualifying MA EPs with respect to a qualifying MA organization. However, we did not pursue this option because the approach results in an average revenue amount across all potentially qualifying MA EPs with respect to a qualifying MA organization and, therefore, would include revenue amounts that exceed the annual per-professional ceiling on incentive payments under FFS for *all* EPs. We said we believed such a result is contrary to the legal requirement that qualifying MA organizations are to receive incentive payments only for qualifying MA EPs that actually provide at least 20 hours per week of patient care services. Under this method there would be also no way to know if the EP provided 80 percent of his/her professional Medicare services to enrollees of the organization.

We also considered a reporting system for which qualifying MA organizations would be required to report eligible-professional-specific information along with MA patient encounters for nonhospital-based office visits. Specifically, we examined requiring qualifying MA organizations reporting qualifying MA EP encounters with MA plan enrollees based on the five levels of office visit codes recognized by Medicare FFS.

We said we believed that such a process would be administratively burdensome and difficult to operationalize. Therefore, we proposed an alternative approach, but sought input from interested parties as to which of the approaches, or perhaps others, would best address the statutory requirement to compensate qualifying MA organizations for qualifying MA EPs the amount that would be payable if payment for services furnished by such professionals were made under Part B instead of Part C.

Therefore, in § 495.204(b)(1) through (3) we proposed an approach in which the revenue received by the qualifying MA EP for services provided to enrollees of the qualifying MA organization would serve as a proxy for the amount that would have been paid if the services were payable under Part B. Under our proposed approach, the qualifying MA organization would report to us the aggregate annual amount of revenue received by each qualifying MA EP for MA plan enrollees of the MA organization. We said we would calculate the incentive payment amount due the qualifying MA organization for each qualifying MA EP as an amount equal to 75 percent of the reported annual MA revenue of the qualifying MA EP, up to the maximum amounts specified under section 1848(o)(1)(B) of the Act.

For qualifying MA EPs who were compensated on a salaried basis, we proposed in § 495.204(b)(4) requiring the qualifying MA organization to develop a methodology for estimating the portion of the qualifying MA EP's salary attributable to providing services that would otherwise be covered as professional services under Part B of Medicare to MA plan enrollees of the MA organization. The methodology, which would require review and approval by us, could be based on the relative share of patient care hours spent with MA enrollees of the organization or another reasonable method. So, for instance, if a qualifying MA EP spends 30 percent of his or her time providing covered Part B physician office services to MA plan enrollees, then the qualifying MA organization would report 30 percent of the qualifying MA EP's salary as annual revenue, which would be used to compute the amount of the MA incentive payment due to the qualifying MA organization for the qualifying MA EP. Thus, if the qualifying MA EP had a base salary of $150,000, 30 percent would be $45,000—which is well over the threshold of $24,000 needed by the MA organization to qualify for a maximum incentive payment of up to $18,000 (70 percent of $24,000) for such a qualifying MA EP in any year. We also proposed to require that salaries be prorated to ensure that the amount reported reflects the salary paid for the applicable year, where necessary.

We also said that salaried physicians' compensation typically does not include an allowance for administrative practice costs. Given that Part B allowed amounts do include practice expense costs, we proposed allowing qualifying MA organizations to identify, where appropriate, an additional amount related to overhead that would be added to the qualifying MA EP's estimated Part B compensation. To the extent Medicare FFS compensation to physicians includes an amount for office space rental, office staffing, and equipment, we believe that qualifying MA organizations should also be permitted

to include an amount for overhead related to such costs not directly experienced by salaried qualifying MA EPs. In § 495.204(b)(4)(ii), we proposed requiring qualifying MA organizations to develop a methodology for estimating the additional amount related to overhead attributable to providing services that would otherwise be covered under Part B of Medicare. We said the methodology would require review and approval by us.

For qualifying MA EPs who are not salaried (that is, who are paid on a capitated or fee-for-service basis), we proposed in § 495.204(b)(5) to require qualifying MA organizations to obtain attestations from such EPs and to submit to us information from the attestations as to the amount of compensation received by the EPs for MA plan enrollees of the MA organization. We are proposing such attestations because many EPs are not paid directly by MA organizations, but rather by intermediary contracting entities, such as physician groups, and as a result the qualifying MA organization may not otherwise know how much compensation is received by each qualifying MA EP. In reporting compensation, we are proposing that the EPs include only those amounts for professional services that would otherwise be payable under Part B and for which payment would be made under, or would be based on, the Medicare physician fee schedule.

Comment: One commenter recommended that final CMS regulations retain the exact requirements outlined in §§ 495.204(b)(4) and (5). Two commenters said that CMS should allow flexibility in methods MA organizations propose for computing incentive payments so long as the organization's approach is reasonable, straightforward, and fairly equates to the Medicare fee-for-service approach without imposing undue burdens on MA organization systems or compromising EP privacy. The proposed rule describes how incentive payment amounts will be calculated for eligible hospitals and EPs. The proposed rule presents options for a MA payment methodology, but expressly solicits comments from MA organizations about how such a methodology could be designed to fairly approximate the FFS payment calculation. The commenters included recommendations about how MA organizations could be reimbursed and what methodology would be a reasonable proxy for the Part B-based payment applied to FFS physicians, based on the amount of individual physician care provided to MA members. The commenters said that MA EPs who are employed by their organizations are independent physician group practices that contract exclusively with their organizations to meet the health needs of their members, including MA enrollees. Their organizations do not pay the salaries of MA EPs who provide patient care services to their members and patients. They said that CMS has proposed that the organization that directly pays the EP salaries would perform a calculation and attest to the MA organization about the amount of payment. They said that while this would mitigate some of the confidentiality concerns related to sharing salary information with the health plans, salary information would still be potentially exposed to CMS. They said that another disadvantage of using actual salary as a basis for calculating the incentive payment is that this approach potentially introduces unacceptable variability into the estimation of proxy amounts for Medicare services. For example, two MA EPs, whose salaries vary significantly but provide the same Medicare services in a reporting period, would have different proxy amounts. Further, they said, if such EPs were billing under Part B, the amount of Medicare services each billed would be the same, regardless of whether their incomes were the same. These commenters went on to propose an alternative method of computing a proxy Part B amount. They said that as a first step, the MA organization would calculate the percentage of clinic time each physician spends caring for MA members. This MA Practice percentage could be derived by either: (1) Capturing the total scheduled appointment time for MA members for each MA EP and dividing that amount by the total scheduled time for that MA EP (for all appointments); or (2) capturing the number of MA member visits/procedures for each MA EP and dividing that amount by the total number of visits/procedures for that MA EP (for all members). The organization would then calculate the average practice cost by specialty for all specialties identified in the annual American Medical Group Association's ("AMGA") salary survey. The commenters explained that AMGA survey provides the median compensation per physician in most specialties as well as the non-compensation related clinic costs per physician (staffing, supplies, overhead, etc.) in most specialties. Adding specialty specific compensation data (for groups > 100 physicians) to the combined average non-compensation related clinic costs for that specialty (for all sized groups) would provide a surrogate amount for each specialty's total operating costs. This would produce the Average Operating Costs by Specialty. Multiplying each MA EP's MA Practice percentage and the Average Operating Costs by Specialty for that MA EP's practice specialty would produce a surrogate Medicare Part B amount. For each MA EP, the MA organization would be paid an incentive equal to 75 percent of the surrogate Medicare billing amount for that physician, such incentive not to exceed the maximum incentive for each payment year of the program (for example, $18,000 if the first year of participation is 2011).

Response: While we appreciate the thought and effort that went into this proposed alternative method of calculating MA EP incentive payments, we are reluctant to adopt it for the simple reason that where salaries, practice costs, or actual MA EP compensation can be known, we believe it is a better read of statutory requirements to work from that actual compensation and cost data than it would be to allow estimation of both. In many respects the proposed alternative method is similar to the method discussed and disposed of in the proposed rule related to estimating physician compensation based on MA bidding and payment data. Although the commenters' alternative version factors in actual practice time, we believe using AMGA salary survey data would be inferior to using actual physician compensation practice cost information. To the extent actual salary information is unknown or unavailable to the MA organization, we believe it could be provided to us in a manner that would protect the privacy of individual MA EPs and physician groups. Furthermore, the proposal also estimates "non-compensation related clinic costs" based on AMGA data, which is, again, inappropriate, when actual overhead costs might be quite different in a specific MA organization. However, based on the commenters concerns regarding provider privacy and the need to develop a consistent and verifiable method of computing the amount payable to qualifying MA organizations for MA EPs we are modifying the regulation text at § 495.204(b)(5) to say that qualifying MA organizations "may" obtain attestations from qualifying MA EPs and "may" submit such information to us—rather than "must." And, we add a new subparagraph (6) that allows the physician group or other payer to

provide EP reimbursement information directly to us. We also provide assurances that we will use the EP reimbursement data for no other purpose than to compute the MA EP incentive payment due the qualifying MA organization.

Comment: One commenter said that in the proposed rule the methodology for estimating the portion of the qualifying MA EP's salary attributable to providing services that would otherwise be covered as professional services under Part B of Medicare to MA plan enrollees of the MA organization would require review and approval by CMS; and that such methodology "could be based on the relative share of patient care hours spent with MA enrollees of the organization or another reasonable method." However, the commenter opined, the proposed rule offers no details about how the review and approval process would be conducted, including dates and timelines for the process. Thus, the commenter recommended that CMS permit flexibility in allowing MA organizations to develop methodologies that will be reasonable in light of organization structure and systems, it is important to provide some guidance about how CMS will review and approve such proposals. CMS should permit, the commenter said, any reasonable payment methodology method that is fair, relatively easy to administer, subject to audit and that provides a reliable approximation of Medicare Part B billing. In addition, the commenter concluded, CMS should provide a simple process for submission and approval of MA payment methodologies.

Response: In the proposed rule at § 495.204(b)(4) we offered flexibility related to the "methodology for estimating the portion of each qualifying MA EP's salary attributable to providing services that would otherwise be covered as professional services under Part B," said that the methodology had to be "approved by CMS," and that the amount could include an "additional amount related to overhead." Based on this comment we are adding a new clause (iii) that says that such methodological proposals must be submitted to CMS by June of the payment year, must be auditable by an independent third-party, and that CMS will review and approve or disapprove such proposals in a timely manner.

Comment: One commenter wanted to know what percentage of the incentive payments will go to eligible professionals under Medicare Advantage.

Response: No known percentage of incentive payment will go to eligible professionals under Medicare Advantage, since MA EP payments are made solely to qualifying MA organizations.

In the proposed rule we said that in applying the instruction in section 1853(m)(3)(A) of the Act to substitute for the amount specified under section 1886(n)(2) of the Act an amount similar to the estimated amount in the aggregate that would be payable if payment for the hospitals' services were made under Part A instead of Part C, we read the term "aggregate" to mean the aggregate installment payments made by us if EHR incentive payments were made under Part A instead of Part C.

Incentive payments to eligible hospitals under the Medicare FFS EHR incentive program are comprised of three components: (1) An initial amount composed of a base incentive payment of $2,000,000 and a second incentive payment amount of $200 per discharge for discharges 1,150—23,000 during a 12-month period selected by the Secretary; (2) the Medicare share; and (3) a transition factor. As discussed in the preamble related to § 495.104(c), for purposes of calculating incentive payments to eligible hospitals under the Medicare FFS EHR incentive program, we are proposing that the 12-month period be based on the FFY. For the purpose of calculating incentive payments for qualifying MA-affiliated eligible hospitals, we similarly are proposing that the 12-month period be based on the FFY.

Section II.B. of this final rule discusses our methodology for calculating the incentive payment for qualifying eligible hospitals under the Medicare FFS EHR program. As set forth in § 495.204(c)(2), we proposed to use the FFS EHR hospital incentive program for purposes of calculating and making the incentive payment for qualifying MA-affiliated hospitals. To the extent data are not available to reimburse MA-affiliated hospitals through the FFS hospital incentive program, we proposed to require submission of such data to us and adopt the same definition of "inpatient-bed-days" and other terms under the Medicare FFS EHR hospital incentive program specified in § 495.104 of this final rule. In such a case we proposed in § 495.204(c)(1) to make payment for such MA-affiliated eligible hospitals to the qualifying MA organization.

The formula for calculating the hospital incentive payment under the Medicare FFS hospital incentive program is an initial amount of the sum of the base amount of $2,000,000 per hospital plus an additional $200 per discharge for discharges 1,150 through 23,000 for that hospital in that payment year. This initial amount is then multiplied by a transition factor and then again by the Medicare share. These last two numbers are fractions and will tend to reduce the initial amount computed in the first step.

Similar to the Medicare FFS EHR hospital incentive program, we proposed to use inpatient-bed-day data, discharges, and other components of the FFS calculation for each qualifying MA-affiliated eligible hospital from the hospital-specific fiscal year that ends during the FFY prior to the FFY that serves as the payment year. To the extent such data are not already available to us through the normal submission of hospital cost reporting data; we proposed requiring qualifying MA organizations seeking reimbursement for their qualifying MA-affiliated eligible hospitals to submit similar data.

We said we can only pay for qualifying MA-affiliated eligible hospitals under common corporate governance based on inpatient-bed-days computed on a fiscal year basis where less than one third of the inpatient-bed-days of Medicare patients are covered under Medicare FFS—Part A. However, it does not appear that reimbursement only under the MA EHR incentive program is required for qualifying MA-affiliated eligible hospitals that are under common corporate governance. Rather, section 1853(m)(3)(B), of the Act only prohibits payment under the MA EHR incentive program when Medicare hospital inpatient-bed-days covered under Part A exceed 33 percent of all Medicare inpatient-bed-days. Although eligibility under the MA EHR hospital incentive program is not available to qualifying MA organizations for any specific hospital when FFS inpatient-bed-days exceed 33 percent of the Medicare total, a qualifying MA organization could be reimbursed through the Medicare FFS EHR hospital incentive payment program for qualifying hospitals under common corporate governance even for hospitals with very low ratios of FFS to MA inpatient-bed days.

Given that the hospital incentive payment methodology and payment amount will be identical under the Medicare FFS EHR incentive program and the MA EHR incentive program, and given that there is no statutory prohibition on reimbursing a qualifying MA-affiliated eligible hospital through the Medicare FFS EHR incentive program, for purposes of administrative efficiency, and pursuant to our authority

under section 1857(e) of the Act to add new "appropriate" contract terms (incorporated for Part D by section 1860D–12(b)(3)(D) of the Act), we proposed requiring that qualifying MA organizations receive incentive payments for qualifying MA-affiliated eligible hospitals through their affiliated hospitals under the Medicare FFS EHR incentive program if they are eligible for such payments, rather than through the MA EHR incentive program. We believe this is the most efficient way in which to administer the MA EHR hospital incentive program in light of the expected low volume of MA-affiliated eligible hospitals (approximately 50 hospitals), and in light of preliminary data which indicates that MA-affiliated eligible hospitals already submit Medicare cost reporting data to us from which we can compute hospital incentive payments due. To the extent sufficient data do not exist to make such payments under the Medicare FFS EHR incentive program, qualifying MA organizations will be required to submit additional data to us.

We did not receive any comments on these provisions and are finalizing them as proposed.

To the extent payments are made to qualifying MA organizations for qualifying MA EPs or qualifying MA-affiliated eligible hospitals, we proposed to conduct selected compliance reviews to ensure that EPs and eligible hospitals for which such organizations received incentive payments were actually meaningful users of certified EHR technology, in accordance with our existing authority in section 1857(d) of the Act and 42 CFR 422.504 of the regulations related to protections against fraud. The reviews would include validation of meaningful user attestations, the status of the organization as a qualifying MA organization, and verification of both meaningful use and data used to calculate incentive payments. We proposed requiring MA organizations to maintain evidence of compliance with all aspects of the MA EHR incentive payment program for 10 years after the date payment is made with respect to a given payment year. Payments that result from incorrect or fraudulent attestations, cost data, or any other submission required to establish eligibility or to qualify for a payment, will be recouped by CMS from the MA organization.

We did not receive any comments on these provisions and are finalizing them as proposed.

Finally, as we indicated above in section II.C.2. of this final rule, we are modifying the regulation text at § 495.204(b)(2) to be consistent with the change to § 495.202(b)(3), since final identification in § 495.202(b)(3) should occur at the same time as final revenue reporting under § 495.204(b)(2), in order to ensure that calculations of payments due under the MA EP incentive payment program can be finalized.

4. Timeframe for Payment

For payments to qualifying MA EPs, in § 495.206 we proposed the timeframe for payment to be after the Medicare FFS program computes incentive payments due under the Medicare FFS EHR incentive program—so the first possible incentive payments would be made sometime in early 2012. We proposed that payments for qualifying MA-affiliated eligible hospitals under common corporate governance occur in the same manner and in the same time frame as payments made under the Medicare FFS EHR incentive program to "subsection (d)" hospitals as discussed in section II.B.2.d. of this final rule.

We proposed to define "payment year" with respect to qualifying MA EPs in § 495.200. Section 1853(l)(3)(C) of the Act directs us to establish the same first payment year for all EPs with respect to any specific qualifying MA organization. Consistent with the statute, we proposed to pay a qualifying MA organization on the same schedule for all of its qualifying MA EPs. In other words, the first year during which the qualifying MA organization receives an incentive payment for its qualifying EPs will be considered the first payment year for all of its qualifying EPs. Accordingly, for purposes of determining the applicable incentive payment limits, the second, third, fourth, and fifth years during which the qualifying MA organization receives an incentive payment for its qualifying EPs will be considered the second, third, fourth, and fifth payments years for each of its qualifying EPs, regardless of whether the MA organization claimed an incentive payment for a particular EP for a prior payment year. Such a consistent payment cycle relative to qualifying MA organizations and qualifying MA EPs obviates the need to track payment years and payment adjustment years based on prior payments or adjustments with respect to any individual qualifying MA EP. Rather, for purposes of payment years and payment adjustment years, any EP employed by or partnering with any specific MA organization will be on the same cycle with respect to that organization.

We said that similar to the Medicare FFS EHR incentive program, payment to qualifying MA organizations for qualifying MA EPs and payment for qualifying MA-affiliated eligible hospitals is available only for a finite number of years. As previously discussed in the section on the calculation of MA incentive payments, above, a qualifying MA organization can receive an incentive payment of up to $18,000 for each of its qualifying MA EPs for its first payment year if its first payment year is 2011 or 2012, or up to $15,000, if its first payment year is 2013, or up to $12,000, if its first payment year is 2014. Note that, similar to the Medicare FFS EHR incentive program, there would be no incentive payments made with respect to a year after 2016.

We proposed to define "payment year" with respect to qualifying MA-affiliated eligible hospitals in § 495.200. For incentive payments for qualifying MA-affiliated eligible hospitals, the first year for which an MA organization may claim payment is FY 2011. Similar to the Medicare FFS EHR hospital incentive program, we proposed to use the hospital inpatient bed-days data from the hospital FY that ends during the FFY prior to the FY that serves as the payment year. For qualifying MA-affiliated eligible hospitals, we proposed to compute hospital EHR incentive payments due in the same manner as they are being computed in the Medicare FFS hospital incentive payment program. For qualifying MA-affiliated eligible hospitals for which the first payment year is 2011 through 2013, up to 3 additional years of incentive payments are available. For qualifying MA-affiliated eligible hospitals for which the first payment year is after 2015, no EHR payment incentive can be made for that year or any subsequent year. Finally, for qualifying MA-affiliated eligible hospitals for which the first payment year is 2014 or 2015, only 2 (or 1) additional year(s) of hospital incentive payments will be available.

Unlike the fixed schedule for application of limitation on incentive payments for MA EPs discussed previously in this section of the final rule in which all employed/partnering MA EPs will be paid on the same schedule (first payment year, second payment year, etc.) with respect to any specific qualifying MA organization, we proposed to make payments to MA organizations for MA-affiliated eligible hospitals on a hospital specific basis. In other words, if a qualifying MA organization has some MA-affiliated eligible hospitals with a first payment year of FY 2011, it may have other MA-affiliated eligible hospitals with a first payment year of FYs 2012 through 2015.

Comment: Two commenters said that payments to MA organizations will be

delayed every year by an unspecified amount of time. The commenters said that it was understood that CMS is charged by statute to avoid making duplicate payments, however MA organizations should be paid without unspecified delay. A suggested alternative by the commenters was to permit MA organizations to attest that their MA EPs will not seek any payment under the Medicare FFS Incentive Program. Alternatively, the commenters suggested, CMS could use an installment payment system (permitted under statute as stated) for MA organizations. The commenters said that this would permit partial payment until the resolution of the duplicate payment issue and would avoid long delays in paying MA incentives.

Response: We do not agree that MA organization EHR incentive payments are subject to "unspecified delay." Rather, since MA organizations will be paid for MA EPs only if such EPs were not paid the maximum incentive payment under the FFS EHR incentive payment program, and since final claims data will not be available until two months after the close of the payment year—see § 495.102(a)(2)—CMS will not be able to compute MA EP payments until the FFS EHR incentive payment program has completed its calculations. This will occur in the early spring of the year after the close of a payment year. Moreover, MA-affiliated eligible hospitals will receive EHR incentive payments on the same schedule as other "subpart (d)" hospitals. Finally, note that MA EPs are free to leave qualifying MA organizations at any time, and since EPs are also free to register for eligibility under FFS Medicare or Medicaid EHR incentive payments, an attestation by a qualifying MA organization would have little merit. For these reasons we cannot accept the suggestion that qualifying MA organizations receive interim or partial mid-year payments for MA EPs.

After consideration of the public comment received, we are implementing these provisions as proposed.

5. Avoiding Duplicate Payment

We proposed duplicate payment avoidance provisions in § 495.208. Section 1853(l)(3)(B) of the Act, as added by the HITECH Act, is entitled "Avoiding Duplication of Payments." Subclause (I) of clause (i) of this paragraph of the Act states that to the extent an MA EP is entitled to the maximum incentive payment under section 1848(o)(1)(A) of the Act, the Medicare FFS EHR incentive payment program, such incentive payment will only be made under the Medicare FFS EHR incentive program. Therefore, before payments can be made to qualifying MA organizations for MA EPs, we must first determine if a maximum incentive payment under the Medicare FFS program has been previously earned by potential MA EPs. Under the Medicare FFS incentive payment program, incentive payment calculations will not be completed for the first payment year, 2011, until the early part of 2012. Therefore, we said we would not be able to make payments to qualifying MA organizations for MA EPs until claims submissions counted for Medicare FFS incentive payments for CY 2011 have been closed, and payment calculations for participating EP under the Medicare FFS EHR incentive program have been completed. This will occur in the early part of CY 2012. In the MA EHR incentive payment program we proposed to follow the FFS EHR incentive payment program schedule—first computing Medicare FFS incentive payments for EPs and then computing and paying MA EP incentive payments, where appropriate—in all subsequent payment years.

We went on to explain that subclause (II) of section 1853(l)(3)(B)(i) of the Act further states that to the extent an MA EP is entitled to less than the maximum incentive payment under the Medicare FFS EHR incentive program, that payment is to be made solely under the MA provision. In other words, we will need to withhold Medicare FFS incentive payments from EPs of less than the maximum to the extent such professionals are also identified as MA EPs under section 1853(l)(2) of the Act. Again, we would need to await the computation of payments due EPs under the Medicare FFS EHR incentive program before we can determine whether the EP is entitled to less than the maximum payment amount under the Medicare FFS EHR program, in which case any incentive payment for the EP will only be made to the qualifying MA organization under the MA EHR program, and not to the EP under the Medicare FFS EHR program.

We also said that section 1853(m)(3)(B) of the Act states that incentive payments for qualifying MA-affiliated eligible hospitals are to be made under either the Medicare FFS hospital incentive payment program, or under the MA hospital incentive payment program. If more than 33 percent of discharges or bed-days of all Medicare patients for a year are covered under Part A, then payment for that year is to only be made under section 1886(n) of the Act—the Medicare FFS EHR incentive program—and no payment is to be made under the MA hospital incentive payment program. Otherwise, to the extent less than 33 percent of bed days of all Medicare patients for an incentive payment year are covered under Part A, then payment for that incentive payment year may be made under the MA EHR incentive payment program.

Unlike the process we proposed to follow related to qualifying EPs (where we will wait for the Medicare FFS incentive payment program to compute eligible physician incentive payments due under that program before determining the amount due under the MA EHR incentive program), we would not need to rely on Medicare FFS EHR incentive payment program calculations before determining eligibility for MA-affiliated hospital incentive payments. We said we would reimburse all hospitals, including MA-affiliated eligible hospitals, under the Medicare FFS hospital incentive program. We believe that by doing so, we will prevent duplicate payments being made for the same hospitals by Medicare FFS and the MA incentive payment programs. To the extent that qualifying MA organizations are to receive incentive payments through the MA program rather than through their hospitals under the Medicare FFS EHR incentive program due to a lack of sufficient data to make payments under the FFS program, we would identify and reimburse only appropriate qualifying MA organizations for qualifying MA-affiliated eligible hospitals. Such reimbursement will be in a manner similar to the manner in which the Medicare FFS EHR incentive program will reimburse eligible hospitals due an incentive payment under the Medicare FFS EHR incentive program.

Finally, we said that in order to avoid duplicate payments and in accordance with section 1853(m)(3)(B)(ii)(II) of the Act, we will not make MA EHR hospital incentive payments to qualifying MA organizations for MA-affiliated eligible hospitals other than through the Medicare FFS EHR hospital incentive payment program without first ensuring that no such payments under the Medicare FFS EHR hospital incentive payments were made.

We did not receive any comments on these provisions and are finalizing them as proposed.

6. Meaningful User Attestation

We proposed meaningful user attestation requirements in § 495.210. For each MA EP and MA-affiliated hospital for which a qualified MA organization seeks an incentive

payment, the organization must attest, in a form and manner specified by us, that its MA EPs and MA-affiliated eligible hospitals are meaningful EHR users, as required by sections 1853(l)(6) and 1853(m)(1) of the Act. We further proposed to adopt the definitions of meaningful user under the Medicare FFS program related to EPs and eligible hospitals in § 495.4. We are requiring qualifying MA organizations to attest each payment year whether each of its MA EPs and MA-affiliated eligible hospitals for which it is seeking an incentive payment was a meaningful EHR user for the EHR reporting period for a payment year. A qualifying MA organization must make this attestation for each payment year for which it is seeking an incentive payment for MA EPs and MA-affiliated eligible hospitals. We believe attestations should occur toward the end of a year with respect to that year, since qualifying MA organizations will need to attest to, based on our proposed rule, meaningful use for the appropriate duration and during the appropriate period related to MA EPs and MA-affiliated eligible hospitals before claiming incentive payments for them.

In the proposed rule we said that unlike the Medicare FFS EHR incentive program, where we will require the reporting of clinical quality measures—*see* § 495.8—we will not require qualifying MA organizations to submit clinical quality measures per section 1848(o)(2)(B) of the Act, with respect to EPs, and section 1886(n)(3)(B) of the Act, with respect to eligible hospitals. Consistent with sections 1848(o)(2)(B)(iii) and 1886(n)(3)(B)(iii) of the Act, we note that qualifying MA organizations sponsoring coordinated care MA plans are already required to submit Healthcare Effectiveness Data and Information Set (HEDIS), Health Outcomes Survey (HOS), and Consumer Assessment of Healthcare Providers and Systems (CAHPS) measures per § 422.152 and § 422.516. Coordinated care MA plans include HMO, PPO and RPPO (Regional PPO) plans. Beginning with CY 2010, PFFS and MSA plans will also be required to begin collecting and submitting administrative HEDIS measures.

We believe that all qualifying MA organizations will be organizations offering MA coordinated care plans, and therefore; those MA organizations from which we routinely receive complete HEDIS dataset reporting. Pursuant to sections 1848(o)(2)(B)(iii) and 1886(n)(3)(B)(iii) of the Act, for clinical quality measures which overlap between the existing MA quality reporting program and under the EHR incentive program, we proposed to allow qualifying MA organizations to continue reporting under the existing MA quality reporting program. For those HITECH clinical quality measures that do not overlap and that are appropriate for the MA program, we are considering requiring that qualifying MA organizations that receive an incentive payment report those measures to CMS. This would ensure that clinical quality measure reporting under HITECH is consistent between the FFS program and MA. An alternative approach would be to require that qualifying MA organizations that receive an incentive payment report all of the HITECH clinical quality measures under section II.A.2 of this final rule that are appropriate for the MA program directly to CMS, while also reporting those HEDIS, HOS, and CAHPS measures under the existing MA quality program. This may result in duplicative reporting under the HITECH program and current MA quality reporting, but may provide us with more direct access to quality data under the HITECH program. We invite public comment on these approaches, including alternative methods to consistently treat MA-affiliated providers and FFS providers under the HITECH Medicare incentive program.

Comment: The meaningful use criteria make reference to checking eligibility electronically and submitting claims electronically for 80 percent of patients seen. This would not be possible for us because, for most of our visits, there is no insurance company with which to check, and there is no eligibility to submit claims to. We are a capitated system and for most of the patient visits, the concept of checking eligibility and submitting claims in not relevant.

Response: This comment points out the difficulty in adopting FFS Medicare meaningful use measures for qualifying MA organizations, MA-affiliated hospitals and MA EPs. For purposes of determining meaningful use in a Medicare Advantage environment, we agree that submitting claims electronically is not a useful standard in a capitated environment where virtually all patients are members of the same insurance plan.

Comment: One commenter said that given the sensitivity of the data, and the RHQDAPU program specifications, the commenter believes CMS should never request that hospitals submit patient-level data to CMS, but that the data submitted should always be at the aggregated, summary level. The commenter encouraged us to state specifically that this is its intention in FY 2012 and all future years of EHR incentive program reporting. Some other commenters said that their health care delivery systems were based on an integrated care delivery model, where coordination of care is supported through program-wide EHR implementation that enables a patient's medical record to be shared among the members of the patient's care team. The commenters said they believed patient-centric electronic medical record models that integrate clinical information across providers align with goals of ONC's Strategic Plan and reform efforts that seek to enable more patient-centric integration of care. The commenters said that during any given reporting period under the EHR incentive payment program, patients may receive health care services from various providers (for example, the primary care physician, one or more specialists, nurse practitioners, etc.). The commenters said they had adopted program-wide policies and procedures for using their EHR system to promote coordinated delivery of care. Thus, the commenters said they intended to use their EHR system to support the functionality and care delivery criteria of meaningful use for all providers across their organizations. Within their organizations, they said, a single provider is never solely responsible for all the information in a given patient's electronic medical record. In fact, they said, many providers may access the patient's electronic record to view or add information, order tests or medications, review results, etc. They said the shared record makes it extremely difficult to reliably track all the meaningful use criteria to each EP in their organizations without adding additional administrative functionality to their systems that would do nothing to improve patient care. It would be inappropriate and not the intent of the EHR incentive payment program, they said they believed, to add unnecessary redundancy in care delivery (that is, providers re-entering correct demographic information to get "credit" for that measure). They said they intended to participate in the EHR incentive payment program under provisions for Medicare Advantage organizations. They went on to say that since the proposed rule states, "the qualifying MA organization must attest to the fact that each MA EP is a meaningful user of certified EHR technology * * *," they believed such attestation can be based on measuring criteria at a MA organizational level. While they acknowledged that meeting basic eligibility criteria is appropriate on an individual provider level (that is,

the MA EP must meet the same definition for EP under FFS, satisfy minimum hours per week delivering patient care services, not be hospital-based, etc.), they said they should be able to meet meaningful use criteria as a MA organization on behalf of all of their individual EPs, so long as they are able to demonstrate that their EHR system itself meets the criteria and its use is pervasive and consistent throughout their healthcare delivery sites. They recommended that where a patient's electronic medical record is shared among a team of providers within a MA organization, the meaningful use criteria be measured on an organizational versus an individual provider level. As an alternative they proposed that for any provider who treats a given patient, if the criterion is met in that patient's electronic record, all EPs who are members of the patient's care delivery team would receive "credit" for meeting that measure.

Response: We agree with the commenters in large part. We believe that continued reporting by qualifying MA organizations under the HEDIS program is the most appropriate way to protect personally identifiable patient information. We also believe that in integrated care delivery systems, it does not make sense to require specific individuals to enter specific data in order to obtain meaningful user status—especially in a Medicare Advantage environment where we will require only continued HEDIS reporting as a demonstration of meaningful use. Finally, we believe that reporting of clinical quality measures at the MA organization level is the most effective and appropriate means of attaining the ultimate goal of EHR adoption—improved patient outcomes and reduced healthcare costs.

Comment: Some commenters said that the proposed rule states that, "unlike the Medicare FFS EHR Incentive Program, where we will require the reporting of clinical quality measures * * * we will not require qualifying MA organizations to submit clinical quality measures * * * with respect to EPs * * * and with respect to eligible hospitals * * *. [W]e note that qualifying MA organizations sponsoring coordinated care plans are already required to submit Healthcare Effectiveness Data and Information Set ("HEDIS"), Health Outcomes Survey ("HOS"), and Consumer Assessment of Healthcare Providers and Systems ("CAHPS") measures." The proposed rule suggests allowing MA organizations to continue reporting these measures, but also considers requiring that MA organizations report those HITECH clinical quality measures that do not overlap with these currently reported measures "and are appropriate for the MA program." We believe this current reporting is both appropriate and sufficient to measure the clinical quality of MA programs and should be deemed to satisfy the clinical quality reporting requirements under the EHR incentive payment program. HEDIS, HOS and CAHPS reporting are well-established and subject to audit. The measures are specifically chosen to capture quality within MA organizations, in particular to measure the clinical quality of the team approach we use to deliver care. While we support consistency across the EHR incentive payment program, we are concerned that requiring MA organizations to create new mechanisms for this additional reporting would be unduly burdensome, especially if these additional measures would have to be reported at the individual provider or patient level. Another commenter said that their considerable experience with developing responses for new measures demonstrated how resource and labor intensive clinical quality measurement can be. For example, the commenter continued, during a recent effort to automate ten TJC (The Joint Commission) measures, we identified 87 data elements, only 37 of which are captured as discrete data. Of the remaining 50 measures, some are captured using discrete data in different places in the EHR, and some are captured using free text (for example, clinical trials and other irregular exclusion criteria) and will require the creation of new documentation tools. We estimate it will take one to two years of work for these ten measures to be fully automated, despite our relatively sophisticated use of data warehousing tools and our high level of automation in the data management process. The burden is especially heavy when measurement elements are ill-defined. Under meaningful use clinical quality reporting, over 120 measures have been proposed. Of these, 94 would be measures not currently calculated or reported on a routine basis. We anticipate a considerable increase in workload to create and maintain these measures. Adding new and duplicate—possibly less reliable—measures and reporting systems will be costly, time-consuming and may not have an incrementally significant impact on improving patient care. While we are not opposed to new metrics (those without similar known specifications), such measures should be field tested prior to becoming requirements; in particular, subject to rigorous testing of the electronic specifications. Such measures should also be supported by robust clinical evidence to show they will impact clinical outcomes. MA organizations should be deemed to have satisfied all clinical quality reporting required in the EHR incentive payment program by meeting their current reporting requirements. If additional measures are required, we recommend staged adoption, beginning with those measures that MA organizations already report or can report in the near future. We recommend eliminating measures that have little or no evidence to link them to improved outcomes. Overall, we strongly recommend that CMS significantly reduce the overall number of clinical quality measures that would be required for meaningful use.

Response: We agree with the commenters and believe that HEDIS, HOS and CAHPS are the appropriate means of reporting measures for both MA EPs and MA-affiliated hospitals. Where appropriate we will consider adding elements to these already existing quality reporting programs. We will consider adding HEDIS elements over time, as experience and clinical data warrant.

Comment: One commenter said one of the five priorities specified by CMS is to improve care coordination. However, the siloed nature of the incentive payments, lack of a robust set of care coordination measures, and the narrow definition of eligible professionals do not fully support this priority. The commenter also said that the current structure of the proposed incentive program, as required by statute, maintains the current siloed structure of Medicare and Medicaid payments. The selected functionality and quality measures in large part do the same. However, this siloed structure does not support or encourage integrated coordinated care across providers and settings. As greater attention is paid to improving care coordination and the quality of care through integrated care models (for example, accountable care organizations, patient-centered medical homes), greater attention should be given to selecting measures that focus on patient-centered episodes of care. Furthermore, consideration should be given to refining the incentive payment structure to foster integration and accountability among and across providers and settings.

Response: We believe that HEDIS reporting and other existing quality reporting programs (that is, HOS and CAHPS) go a long way toward assuring that coordination and integration of care will continue to occur in the Medicare Advantage environment. One of the

purposes of EHR adoption is to facilitate the coordination of care in health care environments where care coordination is not currently perceived to occur. We are asking providers to pick a program through which they are most likely to be eligible for EHR incentive payments. For MA organizations that treat Medicare, Medicaid and dually-eligible patients, EHR incentive payments will be made only under one program (Medicare or Medicaid) with respect to any specific EP. However care coordination should occur regardless of health insurance or EHR incentive payer. After consideration of the public comments received we are not changing our proposed policy to allow qualifying MA organizations to establish meaningful use through attestation and to demonstrate meaningful use through continued HEDIS reporting.

Finally, we proposed requiring qualifying MA organizations to submit attestations to us related to meaningful use by MA-affiliated hospitals within 30 days of the close of the FFY—which is the payment year for MA-affiliated hospitals—by October 30. We also proposed requiring qualifying MA organization to submit attestations to us related to meaningful use by MA EPs within 30 days of the close of the MA EP payment year—which is a CY—by January 30. In this final rule we are modifying the regulation text at § 495.210(b) and (c) to be consistent with the changes to § 495.204(b)(2) and § 495.202(b)(3), since the deadline for attestations of meaningful use should be consistent with deadlines for revenue reporting for MA EPs, and final identification of MA EPs and MA-affiliated hospitals. We are extending the timeframe for reporting meaningful use to 60 days after the close of the payment year.

7. Posting Information on the CMS Web Site

In the proposed rule we said that sections 1853(l)(7) and 1853(m)(5) of the Act require us to post information on an Internet Web site related to the receipt of incentive payments under the MA EHR incentive program. We said posted information would include the names, business addresses, and business phone numbers of each qualifying MA organization receiving an incentive payment under this section for qualifying MA EPs and hospitals. A list of the names of each qualifying MA EP and qualifying MA-affiliated eligible hospital for which an incentive payment has been made would also be posted. Since this requirement is applicable to other Medicare EPs and eligible hospitals, we have included this requirement in § 495.108.

We did not receive any comments on these provisions and are finalizing them as proposed.

8. Limitation on Review

In the proposed rule we said that section 1853(l)(8) of the Act states that there shall be no administrative or judicial review under section 1869 of the Act, section 1878 of the Act, or otherwise of the methodology and standards for determining payment amounts and payment adjustments under the MA EHR EP incentive program. We said this includes provisions related to duplication of payment avoidance and rules developed related to the fixed schedule for application of limitation on incentive payments for all qualifying MA EPs related to a specific qualifying MA organization. This also includes the methodology and standards developed for determining qualifying MA EPs and the methodology and standards for determining a meaningful EHR user, including the means of demonstrating meaningful use and the selection of measures. We proposed to codify these requirements in § 495.212(b).

Section 1853(m)(6) of the Act, as added by the HITECH Act, states that there shall be no administrative or judicial review under section 1869, section 1878, or otherwise of the methodology and standards for determining payment amounts and payment adjustments under the MA EHR hospital incentive program. This includes provisions related to duplication of payment. This also includes the methodology and standards developed for determining qualifying MA hospitals and the methodology and standards for determining a meaningful EHR user, including the means of demonstrating meaningful use and the selection of measures. We proposed to codify these requirements in § 495.212(c).

We did not receive any comments on these provisions and are finalizing them as proposed.

9. Conforming Changes

In the proposed rule we said that sections 4101(e) and 4201(d)(2) and (3) of the HITECH Act provide conforming amendments to Part C of the Social Security Act. Therefore, we proposed the following conforming changes to the regulations text:

- Revising § 422.304 by adding a new paragraph (f) to account for the amendment to section 1853(a)(1)(A) of the Act referencing the additional EHR incentive payments that may be made to qualifying MA organizations in the section of the statute that provides for monthly capitation payments to MA organizations. (This addition would also act as a cross-reference to MA EHR incentive payment rules in subpart C of part 495 of this chapter.)
- Revising § 422.306(b)(2) by adding a new paragraph (iv) to address the amendments to section 1853(c)(1)(D)(i) of the Act which exclude the EHR incentive payments made to EPs and hospitals under the Medicare FFS program from the computation of FFS costs in a year for the purpose of computing MA monthly capitation amounts.
- Revising § 422.308 by adding a new paragraph (a)(1) to address the amendments to section 1853(c)(1)(D)(1) and (c)(6)(A) of the Act regarding the exclusion of FFS Medicare EHR incentive payments and adjustments from the calculation of the national per capita growth percentage.
- Revising § 422.322 by adding a new paragraph (a)(3) to account for the amendments to section 1853(c)(6)(A) and (f) of the Act specifying that the source of EHR incentive payments to qualifying MA organizations are from the Federal Hospital Insurance Trust Fund or the Supplementary Medical Insurance Trust Fund.
- Revising § 422.322(b) by adding a reference to § 495.204 to address the amendment to section 1851(i)(1) of the Act that indicates that EHR incentive payments are instead of incentive payments that would otherwise be payable under original Medicare.

We did not receive any comments on these provisions and are finalizing them as proposed.

10. Payment Adjustment and Future Rulemaking

In the proposed rule we said that in future rulemaking we will develop standards related to payment adjustments to qualifying MA organizations related to MA EPs and MA-affiliated eligible hospitals that are not meaningful users of certified EHR technology. We solicited comment on how we can most effectively and efficiently apply payment adjustments to qualifying MA organizations whose MA eligible EPs and hospitals have not successfully meaningfully used certified EHR technology.

The statutory requirement related to imposition of payment adjustments with respect to MA EPs is set forth in section 1853(l) of the Act. Specifically, section 1853(l)(4) of the Act requires that instead of applying the payment adjustment in section 1848(a)(7) of the Act, we apply the payment adjustment

to the Medicare physician expenditure proportion. This is our estimate of the proportion of the expenditures under Parts A and B paid to the qualifying MA organization in the form of capitation payments under section 1853 of the Act that are not attributable to the EHR incentive payment program, that are attributable to expenditures for physician services. In the case of a qualifying MA organization that attests that not all MA EPs of the organization are meaningful EHR users with respect to years beginning with 2015, we are directed to apply the payment adjustment on the proportion of the capitation payment with respect to all such EPs of the organization that are not meaningful users for such year. The adjustment amount is 1 percent for 2015, 2 percent in 2016, and 3 percent in 2017 and subsequent years.

Comment: Two commenters said that the EHR Incentive Program (the Medicare component) is limited to providers who bill for Part B covered services under traditional FFS Medicare or for MA organizations that provide equivalent services to MA beneficiaries. In addition to incentive payments, the program will impose penalties on providers who do not adopt technology and meet criteria for meaningful use of electronic health records; those penalties will be in the form of percentage reductions in Medicare reimbursements, beginning in 2016. Medicare section 1876 (of the Act) cost contract programs by statute are not eligible for the EHR Incentive Program. The proposed rule does not expressly state whether physicians paid under a cost plan will be required to meet meaningful use criteria to avoid the payment adjustments that will take effect after 2015. CMS should clearly state that those providers who are not eligible to participate in the EHR Incentive Program will not be subject to reductions in payment for not achieving meaningful use, for instance any providers reimbursed under Medicare cost contract arrangements.

Response: While it is true that current statute applies payment adjustments beginning in 2015 only to FFS and MA providers, it is also true that cost plan providers might provide either FFS or MA services to which adjustments would apply. So, while it is true that cost plan payments are unaffected, a blanket statement that cost plan providers are unaffected is not possible.

The statutory requirement related to imposition of payment adjustments with respect to MA-affiliated eligible hospitals is provided in section 1853(m) of the Act. Specifically, section 1853(m)(4) of the Act requires us to apply the adjustment to the hospital expenditure proportion, which is our estimate of the proportion of the expenditures under Parts A and B paid to the qualifying MA organization in the form of capitation payments under section 1853 of the Act that are not attributable to the EHR incentive payment program, that are attributable to expenditures for inpatient hospital services. In the case of a qualifying MA organization that attests that not all MA-affiliated eligible hospitals of the organization are meaningful EHR users with respect to years beginning with 2015, we are directed to apply the payment adjustment on the proportion of all such MA-affiliated eligible hospitals of the organization that are not meaningful users for such year. The adjustment amount is of three-fourths of the market basket increase related to a hospital by a 33⅓ percent reduction in 2015, by a 66⅔ percent reduction in 2016, and by a 100 percent reduction in 2017 and all subsequent years. Effectively, the reduction is of all but 25 percent of the market basket increase for a specific hospital in years after 2016.

We received no additional comments.

D. Medicaid Incentives

1. Overview of Health Information Technology in Medicaid

Under the HITECH Act, State Medicaid programs, at their option, may receive Federal financial participation (FFP) for expenditures for incentive payments to certain Medicaid providers to adopt, implement, upgrade, and meaningfully use certified EHR technology. Additionally, FFP is available to States for reasonable administrative expenses related to administration of those incentive payments as long as the State meets certain conditions. Section 1903(a)(3)(F)(i) of the Act, as amended by section 4201 of the HITECH Act, establishes 100 percent FFP to States for providing incentive payments to eligible Medicaid providers (described in section 1903(t)(2) of the Act) to adopt, implement, upgrade, and meaningfully use certified EHR technology. The incentive payments are not direct reimbursement for the purchase and acquisition of such technology, but rather are intended to serve as incentives for EPs and eligible hospitals to adopt and meaningfully use certified EHR technology.

Section 1903(a)(3)(F)(ii) of the Act, as amended by section 4201 of the HITECH Act, also establishes 90 percent FFP to States for administrative expenses related to carrying out the substantive requirements associated with the incentive payments.

Finally, as required by section 1903(t)(10) of the Act, CMS will be reporting to Congress on the status, progress, and oversight of the overall EHR incentive program. These reports will discuss steps taken to avoid duplicate Medicare and Medicaid incentive payments to EPs, the extent to which Medicaid EPs and hospitals have adopted certified EHR technology as a result of the incentive payments, and any improvements in health outcomes, clinical quality, or efficiency resulting from the adoption of such technology.

Comment: A commenter requested additional discussion in the final rule of the many challenges that exist to adopting electronic health record technology experienced by the Medicaid Transformation Grantees.

Response: The primary challenges faced by the Medicaid Transformation Grantees involved assisting providers to adopt the EHRs and to successfully integrate utilization of the EHRs into their practice workflow. Workflow redesign is unique to each practice based upon practice size, clinical specialty area, practice operation (for example, medical home teams or specialty care) and the providers' hardware and software. In addition, Grantees reported that providers value the EHRs only in so far as the patient data in the EHR is timely and complete. Therefore lagging data feeds or gaps in data from certain sources, such as labs or Part D claims for dual eligibles, were observed to discourage providers from investing their time and effort into learning how to use the EHRs. Many Grantees noted that early negative experiences with workflow or with timely and accurate access to relevant data discouraged providers from using the system. They reported needing to dedicate significant time and resources to provider outreach, technical assistance and training. Some Grantees focused on identifying or developing the right EHR product only to conclude afterwards that their focus needed to be equally, if not more, on supporting their providers' use of the EHR, including fostering health information exchange through interface development. In summary, the Medicaid Transformation Grantees affirmed that the barriers faced by Medicaid providers to EHR adoption and use were not unique to Medicaid. There were several challenges to HIT/EHR implementation that were specific to Medicaid programs that may be useful for States in light of HITECH. These include, integration of HIT into the State Medicaid Management Information System (MMIS); churning

of Medicaid patients on/off Medicaid eligibility; issues of consent with patients with diminished capacity, children and their parents and caregivers, and foster children/wards of the State; costs associated with transaction fees for pharmacy hubs on a statewide scale; and how to calculate return on investment and quality outcomes as a result of HIT programs that are running concurrent with other quality initiatives with the same goals, such as the medical home model, disease management/care coordination and provider pay-for-performance.

While this information is valuable in terms of understanding and addressing the challenges to EHR adoption, we continue to believe that the benefits of meaningful use of EHRs far outweigh the implementation challenges.

2. General Medicaid Provisions

In § 495.320 and § 495.322 we provide the general rule that States, at their option, may receive: (1) 90 percent FFP for State expenditures related to the administration of an EHR incentive program for certain Medicaid providers that are adopting, implementing, or upgrading and meaningfully using certified EHR technology; and (2) 100 percent FFP for State expenditures for those incentive payments.

We did not receive any comments and we are finalizing these provisions as proposed.

3. Identification of Qualifying Medicaid EPs and Eligible Hospitals

a. Overview

As specified in section 1903(t)(2) of the Act, only certain Medicaid providers will be eligible for incentive payments. This section discusses some of these eligibility requirements, including requirements relating to patient volume, whether a provider is hospital-based, and whether an EP is practicing predominantly in a federally-qualified health center (FQHC) or a rural health clinic (RHC). Regulations relating to these requirements may be found at § 495.304 through § 495.306.

b. Program Participation

As specified under section 1903(t)(2)(A) of the Act, Medicaid participating providers who wish to receive a Medicaid incentive payment must meet the definition of a "Medicaid EP." This definition (1903(t)(3)(B) of the Act) lists five types of Medicaid professionals: Physicians, dentists, certified nurse-midwives, nurse practitioners, and physician assistants practicing in an FQHC or RHC that is so led by a physician assistant.

Additionally, to qualify for incentives, most Medicaid EPs cannot be "hospital-based." We will use the same definition of "hospital-based" as used in the Medicare EHR incentive program, as sections 1848(o)(1)(C) and 1903(t)(3)(D) of the Act use almost identical definitions of the term. We refer readers to section II.A. for a definition of "hospital-based," and for a thorough discussion of our methodology.

The only exception to this rule is that Medicaid EPs practicing predominantly in an FQHC or RHC are not subject to the hospital-based exclusion.

Medicaid EPs must also meet the other criteria for Medicaid incentive payment eligibility, such as the patient volume thresholds or practicing predominantly in an FQHC or RHC, as described in this subpart. Since the statute at 1903(t)(2)(A)(iii) of the Act does not define "practices predominantly," we specify that an EP practices predominantly at an FQHC or an RHC when the clinical location for over 50 percent of his or her total patient encounters over a period of 6 months occurs at an FQHC or RHC.

Acute care and children's hospitals are listed in section 1903(t)(2) of the Act as the only two types of institutional providers potentially eligible for Medicaid incentive payments. These terms are specific to the Medicaid EHR incentive program and are not currently defined in the Medicaid regulations. Consequently, we define these terms in § 495.302.

As specified under section 1903(t)(2)(B) of the Act, to qualify for incentive payments acute care hospitals also must meet patient volume threshold requirements, as specified in § 495.306. Children's hospitals do not have patient volume requirements for Medicaid incentive program participation.

Comment: Commenters expressed confusion about the restrictions on physician assistants' (PAs) participation. Numerous commenters suggested that PAs should be eligible without conditions, particularly the condition that they are practicing in an FQHC or RHC that is "so led by a physician assistant" and/or CMS should exercise flexibility in defining "so led," in order to capture the highest number of PAs. We received specific comments on how to define "so led" to provide the greatest flexibility to PAs. Suggestions included allowing clinics under a larger FQHC to be led by a PA, but not necessarily the entire FQHC. Also, commenters asked that we consider "led" to mean the dominant clinical provider, which is the case for PAs in many RHCs.

Response: As stated in the statute at 1903(t)(3)(B)(v), regarding the program eligibility for PAs, PAs are eligible when they are a "physician assistant insofar as the assistant is practicing in a rural health clinic that is led by a physician assistant or is practicing in a Federally qualified health center that is so led." These conditions on PAs' eligibility apply whether the PA is qualifying because they meet Medicaid patient volume requirements or if they are qualifying because they practice predominantly in an FQHC or RHC. Since this language requiring that a PA must be leading the FQHC or RHC is derived from statute, we have no flexibility to change or remove it.

However, we agree that we have the authority to interpret what it means for a PA to lead an FQHC or RHC, and we believe a PA would be leading an FQHC or RHC under any of the following circumstances:

(1) When a PA is the primary provider in a clinic (for example, when there is a part-time physician and full-time PA, we would consider the PA as the primary provider);

(2) When a PA is a clinical or medical director at a clinical site of practice; or

(3) When a PA is an owner of an RHC.

We agree that FQHCs and RHCs that have PAs in these leadership roles can be considered "PA-led." Furthermore, since RHCs can be practitioner owned (FQHCs cannot), we will allow ownership to be considered "PA-led."

With the exception of this clarification of PA-led, we are adopting this language as proposed. We have not changed our regulatory language, as we consider this clarification to be an interpretation of our regulations as to what it means to be a PA to be leading an FQHC or RHC.

Comment: We received questions about eligibility related to FQHC look-alikes, tribal clinics, and other similar facilities.

Response: As previously mentioned, in accordance with section 1903(t)(2)(B), the only two facilities eligible for incentives are acute care and children's hospitals. However, EPs at facilities such as FQHCs, RHCs, and tribal clinics may be eligible for participation when they practice predominantly at an FQHC or RHC or meet the other patient volume requirements. The statute defines FQHCs at 1905(l)(2)(B) and defines RHCs at 1905(l)(1) by essentially incorporating the definition in 1861(aa).

Comment: Numerous commenters opposed the proposed definition for "hospital-based."

Response: This is a consideration for Medicare and Medicaid and is addressed in II.A.

After consideration of the public comments received, we are making changes under II.A.

(1) Acute Care Hospitals

For purposes of Medicaid incentive payments, we proposed to define an "acute care hospital" as a health care facility where the average length of patient stay is 25 days or fewer and with a CCN that has the last four digits in the series 0001 through 0879 (that is, short-term general hospitals and the 11 cancer hospitals in the United States).

We excluded from this proposed definition a category of long-term care hospitals, which are defined for Medicare purposes in regulations at § 412.23(e). Specifically § 412.23(e)(2)(i) states that the hospital must have an average Medicare inpatient length of stay of greater than 25 days (which includes all covered and non-covered days of stay of Medicare patients).

Comment: We received numerous comments recommending that CAHs be included in the definition of acute care hospitals for purposes of the Medicaid EHR incentive payment program. Commenters pointed out that the CAHs would qualify on all criteria except for the requirement to have a CCN in the range 0001–0879. CAHs have CCNs in the range 1300–1399. Moreover, many commenters pointed out that, because of their rural location and distance from other hospitals to which they frequently transfer patients, the CAHs would benefit from having electronic records that could be shared with the subsequent provider of care to the patient. Commenters also asked what reimbursement methodology CMS would use if it decided to include CAHs in the Medicaid incentive payment program.

Response: We agree with the commenters that CAHs conform to our definitional criteria for acute care hospital except for the CCN range. Moreover, we recognize the positive impact on quality that may ensue from the CAH's being able to electronically communicate with the hospitals to which it transfers patients. Therefore, in the final rule, we are amending the definition of acute care hospital for purposes of the Medicaid EHR incentive payment program as "those hospitals with an average patient length of stay of 25 days or fewer, and with a CCN that falls in the range 0001–0879 or 1300–1399." This definition will now encompass general short-term hospitals, cancer hospitals, and critical access hospitals that meet the Medicaid patient volume criteria. Since we are including CAHs under the category of "acute care hospital," we are not developing a separate Medicaid incentive payment calculation for CAHs. States will pay the incentive payment to qualifying CAHs using the acute care methodology described at section 495.310(g). In summary, CAHs will be eligible for the Medicaid hospital incentive insofar as they meet the requirements under an acute care hospital described here. While the statute issued specific calculation requirements for CAHs under Medicare, there is no special Medicaid calculation. Like other acute care hospitals, some CAHs may be eligible for Medicare and Medicaid incentives.

We will reflect this definitional change in the final regulation at section 495.302.

Comment: Further guidance was requested on the determination of average length of stay. Commenters questioned whether the average length of stay should be calculated relative to the fiscal year prior to the payment year or relative to the calendar year prior to the payment year. Commenters also questioned whether outliers in terms of extremely long length of stay could be left out of the calculation, and if so, could CMS provide detail on this and any similar exclusions; for example, other exclusions with respect to observation stays.

Response: After consideration of these comments, we believe the best policy is to allow the States to decide whether they will use a fiscal year or calendar year for calculating length of stay, as the State will be in the best position to determine what documentation exists in order to support any length of stay calculation. With respect to outliers, we point readers to the State Operations Manual, page 303, Revision 57, dated January 29, 2010 and we note that these long (and short) stay outliers are included in average length of stay calculations for other purposes, such as reporting statistics to States, Medicare, and other payers. We do not find a basis for excluding outliers from the average length of stay for purposes of the incentive payment. In fact, since acute care hospitals have CCNs in either the 0001–0879 or the 1300–1399 range, and length of stay is one of the definitional criteria for CCNs in these ranges, all of the acute care hospitals are very likely to meet length of stay criteria. Observation stays are considered to be outpatient services and, therefore, cannot be included in average length of stay calculations. This is consistent with the treatment of observation days under Medicare.

In summary we are making no revisions to the regulation as a result of this comment.

(2) Children's Hospitals

For purposes of the Medicaid EHR incentive program, in the proposed rule, we proposed one definition to include only separately certified children's hospitals, with CCNs in the 3300–3399 series in the definition of eligible "children's hospital." By defining "children's hospital" in this way, we: (1) Prevented general acute care hospitals, which could not themselves qualify for the incentive because they did not meet the 10 percent Medicaid patient volume, from using the fact that they have a pediatric wing as justification for requesting a Medicaid incentive payment; (2) excluded many of the facilities that are perceived by the public as children's hospitals, but do not meet the Medicare standards as either freestanding or hospital-within-hospital children's hospitals; and (3) excluded some pediatric specialty hospitals which have CCNs as psychiatric or rehabilitation hospitals.

An alternative definition of a "children's hospital" was also proposed to include those hospitals with Medicare provider numbers in the following series:

- 0001 through 0879—Short-term (General and Specialty) Hospitals.
- 3025 through 3099—Rehabilitation Hospitals (Excluded from Prospective Payment Systems).
- 3300 through 3399—Children's Hospitals (Excluded from Prospective Payment Systems).
- 4000 through 4499—Psychiatric Hospitals (Excluded from Prospective Payment Systems).

This definition, for the purposes of the Medicaid HIT incentive payments, applied only to those freestanding hospitals within the above mentioned series that exclusively furnish services to individuals under age 21.

This broader definition still: (1) Prevented acute care hospitals that cannot independently qualify for the incentive because they do not meet the 10 percent Medicaid patient volume from using the fact that they have a pediatric wing as justification for requesting an HIT incentive payment; (2) allowed for participation in the incentive program by the greatest number of children's hospitals, including rehabilitative and psychiatric specialty hospitals; and (3) aligned with Federal efforts aimed at improving healthcare quality for all children, including those with physical and mental diseases/disabilities.

Comment: CMS received several comments on this issue. Specifically, the commenters stated that the proposed rule limited the definition of children's

hospitals to those that provide care to individuals under the age of 21; the commenters stated that children's hospitals actually may provide care to older individuals who have conditions such as congenital cardiac problems, sickle cell disease and cystic fibrosis.

Response: We agree with the commenters that children's hospitals do on occasion treat patients who are over the age of 21, especially if the patient is on a continued course of treatment for a condition that began in childhood, such as those conditions mentioned. Accordingly, in the proposed rule published on January 13, 2010 at section 495.302, we defined a children's hospital for purposes of the HIT incentive payment program as a hospital that is separately certified as a children's hospital, with a CCN in the 3300–3399 series and predominantly treats individuals under the age of 21. We used the term "predominantly" to recognize that not all patients of the children's hospital are in fact under age 21.

This definition addresses the commenters' concerns and we are not revising it in the final rule. The commenter's may have been responding to the alternate definition in which we requested comments. While that alternate definition mentioned specialty hospitals that exclusively treat individuals under the age of 21, we are not adopting that definition in this final rule, as noted in the response to the comment below.

Comment: CMS also received a few comments that supported our proposed definition of children's hospital as those that are separately certified and predominantly treating individuals under 21 years of age. The commenters urged us to adopt this definition rather than the alternate definition discussed in the proposed rule and on which we requested comments.

Response: We agree with the commenters and are adopting the definition that we originally proposed at section 495.302. See the response to the comment below.

Comment: CMS received one comment that recommended use of the alternative definition as providing more opportunity for hospital participation.

Response: We considered the merits of both definitions and we have decided to maintain the definition originally proposed in section 495.302 as representing the clearest definition of a children's hospital. As previously stated, we only intend to include children's hospitals with CCNs within a specific range; this will not include pediatric wings of larger hospitals.

In summary, after considering the comments, we are adopting the definition of children's hospital as originally proposed.

c. Medicaid Professionals Program Eligibility

For Medicaid EPs, the general rule (subject to the two exceptions listed below) is that the EP must have at least 30 percent patient volume attributable to those who are receiving Medicaid. Section 1903(t)(2)(A)(i) of the Act provides authority to the Secretary to establish the methodology by which such patient volume will be estimated; our proposed methodologies which follow, are based on this discretion. To establish such patient volume, we proposed that the EP have a minimum of 30 percent of all patient encounters attributable to Medicaid over any continuous, representative 90-day period within the most recent calendar year prior to reporting. There are two statutory exceptions to the general 30 percent rule discussed previously. The first exception is that a pediatrician may have at least 20 percent patient volume attributable to those who are receiving medical assistance under the Medicaid program, as estimated in accordance with a methodology established by the Secretary (section 1903(t)(2)(A)(ii) of the Act). Again, the method we proposed to use was that the pediatrician have a minimum 20 percent of all patient encounters attributable to Medicaid over any continuous, representative 90-day period within the most recent calendar year prior to reporting.

The second exception is that Medicaid EPs practicing predominantly in an FQHC or RHC must have a minimum of 30 percent patient volume attributable to "needy individuals." Again, the method we would use is that 30 percent of all patient encounters be attributable to needy individuals over any continuous 90-day period within the most recent calendar year prior to reporting.

Section 1903(t)(3)(F) of the Act defines needy individuals as individuals meeting any of the following three criteria: (1) They are receiving medical assistance from Medicaid or the Children's Health Insurance Program (CHIP); (2) they are furnished uncompensated care by the provider; or (3) they are furnished services at either no cost or reduced cost based on a sliding scale determined by the individual's ability to pay.

Comment: Many commenters requested that CMS consider groups outside of the statute eligible for incentive payments. These facilities and practitioners included: Community mental health centers and other behavioral health providers (including psychiatric clinics); nursing homes, nursing facilities, and skilled nursing facilities; long-term care providers (community and institutional), including home health care providers; pharmacists and pharmacies; social workers; blood centers; provider based departments; professional societies; Medicaid-participating health plans; speech-language pathologists and audiologists; FQHCs, RHCs, tribal providers, and other community clinics; health aides; and podiatrists. The commenters included numerous testimonials, research, and statements to note that these providers are critical partners in improving the quality and coordination of care for the Medicaid population. Some of the commenters acknowledged that this is a statutory issue but assert that exclusion of such providers impacts Medicaid's ability to improve the quality and efficiency of care. Furthermore, some of these commenters based several additional comments upon presumed eligibility. For example, some commenters said that social workers could not afford EHRs and should not be required to participate.

Another group of comments came from health care professionals that sought eligibility for incentives by virtue of early adoption of EHRs but who do not participate in either Medicaid or Medicare. They suggested a third incentive option available for providers that either do not participate with Medicaid/Medicare or would not reach the threshold of patient visits to receive Medicaid incentive payments.

Response: We note that the commenters are correct to recognize that this is a statutory issue. The definition of a "Medicaid EP," at 1903(t)(3)(B) of the Act, lists five types of professionals that are eligible for Medicaid incentive payments: physicians, dentists, certified nurse-midwives, nurse practitioners, and physician assistants practicing in an FQHC that is led by a physician assistant or RHC that is so led. Additionally, the statute at 1903(t)(2)(B) designates acute care hospitals and children's hospitals as the only two types of facilities eligible for the Medicaid incentives. These providers must also meet all other program requirements, including Medicaid patient volume thresholds.

Since the commenters recommend including providers that are not among those explicitly mentioned in the statute, these providers cannot be eligible for the incentive payments.

Additionally, professionals who do not participate in either Medicaid or

Medicare are also not eligible for incentives due to the statutory requirements associated with each program. Specifically, the Medicaid incentives program requires providers to meet Medicaid patient volume thresholds or practice predominantly in an FQHC or RHC, where they must serve needy individuals (as defined at section 495.10). Additionally, the hospital calculations for Medicare and Medicaid are based, in part, on Medicare or Medicaid inpatient bed-days. For Medicare EPs, the incentive is based on the associated Medicare claims. Hence, these professionals cannot meet the statutory requirements for eligibility.

After consideration of these comments, we are maintaining the list of providers eligible for the Medicaid incentive payment program as originally proposed and as identified by statute.

It is worth noting that while the facilities recommended for inclusion by the commenters will not be considered eligible to participate in these incentives, some of the EPs at these facilities may be eligible. One example is that a psychiatrist (physician) or NP is likely to treat individuals at a behavioral health facility. Per our rules at section 495.10, the EP must identify a TIN to which the incentive payment should be made. We believe that, in accordance with 1903(t)(6)(A) of the Act, an EP could reassign payment to a TIN associated with his or her employer or the facility in which she or he works. This facility could be one of those recommended for inclusion by the commenters. Any reassignment of payment must be voluntary and we believe the decision as to whether an EP does reassign incentive payments to a specific TIN is an issue which EPs and these other parties should resolve. Any reassignment of payment must be consistent with applicable laws, rules, and regulations, including, without limitation, those related to fraud, waste and abuse.

We have provided clarifying language at section 495.10(f) to further clarify the reassignment of incentive payments by EPs to specific TINs.

d. Calculating Patient Volume Requirements

As required by section 1903(t)(2) of the Act and discussed in the previous section, all EPs and the vast majority of hospitals will need to meet certain patient volume thresholds in order to be eligible for incentive payments. (The only exception to this rule is for children's hospitals, which have no patient volume threshold requirement).

In addition, where patient volume is a criterion, most providers will be evaluated according to their "Medicaid" patient volume, while some professionals (those practicing predominantly in an FQHC or RHC) will be evaluated according to their "needy individual" patient volume.

We define "patient volume" in § 495.302 to be a minimum participation threshold for each individual Medicaid provider (with the exception of children's hospitals). In the proposed rule, we proposed methodologies for estimating the patient volume thresholds and listed them by entity type.

Further, we proposed that States could submit alternative approaches to the established timeframe for estimating patient volume, through their State Medicaid HIT Plans (SMHP) and we would make a determination of whether it was an acceptable alternative.

In determining the "needy individual" patient volume threshold that applies to EPs practicing predominantly in FQHCs or RHCs, section 1902(t)(2) of the Act authorizes the Secretary to require the downward adjustment to the uncompensated care figure to eliminate bad debt data. We interpret bad debt to be consistent with the Medicare definition, as specified at § 413.89(b)(1). In order to remain as consistent as possible between the Medicare and Medicaid EHR incentive programs, States will be required to downward adjust the uncompensated care figure. Under Medicare, bad debts are amounts considered to be uncollectible from accounts and notes receivable that were created or acquired in providing services. "Accounts receivable" and "notes receivable" are designations for claims arising from the furnishing of services, and are collectible in money in the relatively near future. Providers should be required to use cost reports (for FQHCs and clinics this would be the Medicare 222–92 cost report, or the most recent version of the 222), or other auditable records to identify bad debts. All information under attestation is subject to audit. Our proposed regulations on calculating the needy individual patient volume can be found at § 495.302 and § 495.306.

Further, in establishing the Medicaid patient volume thresholds for EPs and acute care hospitals, section 1902(t)(2) of the Act requires that individuals enrolled in a Medicaid managed care plan be included. We interpret this to mean that individuals enrolled in MCOs, prepaid inpatient health plans (PIHPs), or prepaid ambulatory health plans (PAHPs), under 42 CFR Part 438 be included in the calculation. Therefore, in determining patient volume, providers and States should be aware that individuals enrolled in such plans will be included in the patient volume calculation. Acute care hospitals have to meet the 10 percent Medicaid volume threshold.

Comment: Commenters recommended that CMS provide flexibility in the specific volume thresholds required for program participation (for example, 30 percent for most EPs, 20 percent for pediatricians) and apply a lower percentage or a minimum number of encounters. Some commenters referenced research stating that practices with a 30 percent patient volume may not be financially viable.

Response: The patient volume thresholds of 30 percent and 20 percent are required by statute and cannot be changed in the rulemaking process.

After consideration of the public comments received, we are not making any changes to these statutory requirements.

Comment: Commenters suggested that CMS define "encounter" and take a menu approach to patient volume to allow States several options, based on their data sources. Some commenters provided specific suggestions for patient volume "menu" items. Some commenters further noted that there were inconsistencies in how we applied "encounter" data. Finally, one commenter noted that we should consider how "encounter" data is applied to EPs that bill services through another provider (for example, PAs that bill through MDs). Other commenters asked for a clarification of how "encounters" would apply to the dually-eligible Medicare/Medicaid beneficiaries. Additionally, several commenters provided specific suggestions for alternative methods making an approximate determination of providers' patient volume by [not using patient volume] and extending the look-back period to two years.

Response: We agree with the approach of offering at least some options to States regarding patient volume. This approach allows States to audit their programs using the data sources available to them, while also including the largest number of providers that may treat Medicaid patients. We believe our new approach will correct the inconsistencies in how we applied "encounter." Furthermore, our new definition of encounter will capture the dually-eligible beneficiaries, as well as individuals who are in a Title XIX-funded 1115 demonstration project. Specifically, the statute at 1903(t)(2) states that Medicaid patient volume will be "attributable to individuals who are

receiving medical assistance under [Title XIX]," and also states that the patient volume calculation for those practicing predominantly in an FQHC or RHC will be "attributable to needy individuals." Needy individual is defined at 1903(t)(3)(F) as "an individual—(i) who is receiving assistance under Title XIX; (ii) who is receiving assistance under Title XXI; (iii) who is furnished uncompensated care by the provider; or (iv) for whom charges are reduced by the provider on a sliding scale basis based on the individual's ability to pay." We believe our final rule definition of "encounter" captures care to all of these individuals.

Additionally, consistent with the statute, we expect providers and States to make estimation in accordance with the methodologies we established here. This estimation would need to be made with reasonable effort, using verifiable data sources by the provider and the State.

Finally, we do not agree with any of the suggestions from commenters that involve using a benchmark number of Medicaid patients or other suggestions that involve a deviation from the statutory language. The statute is clear that Medicaid patient volume must be considered and explicitly specified percentages of caseload mix compositions attributable to either Medicaid and/or "needy" individuals that must be achieved for participation in the incentive program. We also do not agree with allowing the provider to consider a period longer than a year prior to registering because that is not a current, accurate portrayal of the provider's participation in Medicaid.

After consideration of the public comments received, we are revising the patient volume approach to the following two options. The State may choose one of the two options listed below (or both options), or a State-proposed alternative, if approved by CMS. The State's strategy must be submitted for review and approval through the SMHP, in accordance with all requirements at section 495.332.

A Medicaid provider may demonstrate patient volume by:

(1) Having patient encounters within the 90-day period by using the same methodology we proposed in the proposed rule.

This first option preserves the methodology we proposed in the proposed rule, however we clarify "encounter" below. For the Medicaid patient volume, the methodology for estimating patient volume would require calculation of a threshold (represented below) using as the numerator the individual hospital's or EP's total number of Medicaid patient encounters in any representative continuous 90-day period in the preceding calendar year and the denominator is all patient encounters for the same individual professional or hospital over the same 90-day period. We are not prescribing standards for what is a "representative" period, but we intend to apply a plain meaning test. In other words, if a reasonable person would not consider the selected period to be representative (for example, because the selected period included a short-term temporary Medicaid outreach program), then it would not support a threshold calculation.

[Total (Medicaid) patient encounters in any representative continuous 90-day period in the preceding calendar year/ Total patient encounters in that same 90-day period] * 100

For the needy individual patient volume, the methodology for estimating patient volume would require the same calculation, but with the numerator equal to the EP's total number of needy individual patient encounters in any representative 90-day period in the preceding calendar year.

[Total (Needy Individual) patient encounters in any representative continuous 90-day period in the preceding calendar year/Total patient encounters in that same 90-day period] * 100

Table 15, below, demonstrates the above-referenced patient volume thresholds. (This same Table appeared in the proposed rule, with a few minor clarifications included in this Table).

TABLE 15: Qualifying Patient Volume Threshold for Medicaid EHR Incentive Program

Entity	Minimum 90-day Medicaid Patient Volume Threshold	
Physicians	30%	Or the Medicaid EP practices predominantly in an FQHC or RHC - 30% "needy individual" patient volume threshold
Pediatricians	20%	
Dentists	30%	
Certified nurse midwives	30%	
Physician Assistants when practicing at an FQHC/RHC led by a physician assistant	30%	
Nurse Practitioner	30%	
Acute care hospital	10%	N/A
Children's hospital	N/A	N/A

(2) Having a Medicaid enrollee on the panel assigned to the EP (for example, managed care or medical homes) within that representative 90-day period.

With more than 70 percent of Medicaid and CHIP enrollees receiving care in a managed care delivery system, and additional enrollees in medical homes, we determined that it was necessary to look for flexibility in how we applied these requirements. Under this option, we wanted to capture the EP's panel assignments, as well as any additional unduplicated Medicaid encounters. In other words, we do not intend for the EP to count an assigned patient who was also an encounter more than once.

The methodology for estimating the Medicaid patient volume threshold (represented above) would use as the numerator the individual hospital's or EP's total number of Medicaid patients assigned through a Medicaid managed

care panel, medical or health home program panel, or similar provider structure with capitation and/or case assignment, plus all other Medicaid encounters for that EP. The assignment must be current within the 90-day period and we will consider as a proxy for this an encounter with any patient on the panel within the previous calendar year prior to the representative 90-day period when the patient was on the panel. Note that, as stated above, while the EP may add in encounters with other, non-panel Medicaid patients to the numerator, these encounters must be patients who are not assigned to a panel and would be encounters that occurred during the representative 90-day period. The denominator is all patients assigned to the EP or hospital for the same 90-day period, also with whom the provider had at least one encounter in the prior calendar year as a proxy, as well as any other unduplicated Medicaid encounters during the representative 90-day period.

{[Total (Medicaid) patients assigned to the provider in any representative continuous 90-day period in the preceding calendar year, with at least one encounter taking place during the calendar year preceding the start of the 90-day period] + [Unduplicated (Medicaid) encounters in the same 90-day period]/[Total patients assigned to the provider in that same 90-day period, with at least one encounter taking place during the calendar year preceding the start of the 90-day period] + [All unduplicated encounters in that same 90-day period]} * 100

For the needy individual patient volume for EPs enrolled in managed care and medical homes, the threshold (represented below) would be calculated in the same manner, but with the numerator equal to the EP's total number of needy individuals assigned to the patient panel in any representative 90-day period in the preceding calendar year with at least one encounter within that year.

{[Total (Needy Individual) patients assigned to the provider in any representative continuous 90-day period in the preceding calendar year, with at least one encounter taking place during the year preceding the 90-day period] + [Unduplicated (Needy Individual) encounters in the same 90-day period]/[Total patients assigned to the provider in that same 90-day period, with at least one encounter taking place during the year preceding the 90-day period] + [All unduplicated encounters in that same 90-day period]} * 100

Table 15 demonstrates the above-referenced patient volume thresholds per provider type.

In order to resolve any inconsistencies with the definitions of "encounter," for purposes of EP patient volume, we have allowed the following to be considered Medicaid encounters:

(1) Services rendered on any one day to an individual where Medicaid or a Medicaid demonstration project under section 1115 of the Act paid for part or all of the service; or

(2) Services rendered on any one day to an individual for where Medicaid or a Medicaid demonstration project under section 1115 of the Act paid all or part of their premiums, co-payments, and/or cost-sharing.

For purposes of calculating hospital patient volume, we have allowed the following to be considered Medicaid encounters:

(1) Services rendered to an individual per inpatient discharges where Medicaid or a Medicaid demonstration project under section 1115 paid for part or all of the service;

(2) Services rendered to an individual per inpatient discharge where Medicaid or a Medicaid demonstration project under section 1115 of the Act paid all or part of their premiums, co-payments, and/or cost-sharing;

(3) Services rendered to an individual in an emergency department on any one day where Medicaid or a Medicaid demonstration project under section 1115 of the Act either paid for part or all of the service; or

(4) Services rendered to an individual in an emergency department on any one day where Medicaid or a Medicaid demonstration project under section 1115 of the Act paid all or part of their premiums, co-payments, and/or cost-sharing.

We wanted to adequately reflect what an encounter looked like for a hospital and apply these concepts consistently across the numerous areas of this final rule. We used inpatient discharges and emergency department services for the hospitals because this is consistent with how we will make hospital-based determinations for EPs and how we collect meaningful use information for hospitals. We decided that services rendered on one day would be an encounter. An emergency department must be part of the hospital under the qualifying CCN.

For purposes of calculating *needy individuals patient volume,* we have allowed the following to be considered needy patient encounters:

(1) Services rendered on any one day to an individual where Medicaid or CHIP or a Medicaid or CHIP demonstration project under section 1115 of the Act paid for part or all of the service;

(2) Services rendered on any one day to an individual where Medicaid or CHIP or a Medicaid or CHIP demonstration project under section 1115 of the Act paid all or part of their premiums, co-payments, and/or cost-sharing; or

(3) Services rendered to an individual on any one day on a sliding scale or that were uncompensated.

We understand that multiple providers may submit an encounter for the same individual. For example, it may be common for a PA or NP to provide care to a patient, then a physician to also see that patient. It is acceptable in circumstances like this to include the same encounter for multiple providers when it is within the scope of practice.

We considered whether Medicaid providers or States should pick from the two options provided above. Since States are responsible for auditing the program and must have reliable sources of data, we agree with commenters that it must be States that make a determination as to whether either option will be permitted (or both).

In the proposed rule, we also proposed that if States had an alternative approach for the timeframe in accounting for the methodology, they would be allowed to submit it in the SMHP for review and approval. For the final rule, we are modifying this option. As stakeholders' understanding of the program matures and new technologies become available, there may be new solutions that we did not consider here, but would be a better option for one or several States. To that end, in this final rule we are providing flexibility to consider States' alternative methodologies for measuring not just the timeframe that is used in establishing patient volume, but all of the elements included in the patient volume calculation (except the thresholds established by statute). Therefore, we have revised our final regulations to allow States to offer alternatives regarding the methodology used to establish patient volume, and for the Secretary to adopt these options, so that they may be used by other States as well. An alternative would need a verifiable data source. A State also would need to provide us with an analysis to demonstrate that the methodology being proposed by the State did not result, in the aggregate, in fewer providers becoming eligible than under the two options presented in this final rule. Finally, if a State is reviewed and approved for an alternative

methodology, we will post this alternative methodology on the CMS internet Web site, and allow other States to adopt the methodology as well, thereby ensuring that the alternative is a methodology that is "established by the Secretary." While we believe that States will not submit alternative methodologies until after the first year of the program, allowing for such alternatives will permit the patient volume calculation to evolve along with State and provider experience of the program.

We believe that these solutions will help address issues for providers practicing across State lines, who may have their Medicaid patient volume derived from more than one State. We encourage States to build partnerships, particularly through data sharing agreements. Medicaid providers must still annually re-attest to meeting the patient volume thresholds.

After consideration of the comments, we are revising § 495.302, § 495.306, and § 495.332 regarding patient volume, patient encounters and the associated revisions to the SMHP requirements.

Comment: Commenters asked CMS to include all individuals receiving services through section 1115 demonstrations as eligible encounters.

Response: Although the commenter did not elaborate, we believe the commenter is referring to section 1115 demonstrations under the authority of section 1115(a)(2) of the Act. Our final regulations allow two alternate methods for States to estimate Medicaid patient volume. Under both methods, however, the State must review whether a Medicaid "patient encounter" occurred. Our regulations, at 495.306(e) state that a Medicaid encounter will exist where Medicaid (or a Medicaid demonstration project approved under section 1115) paid for part or all of the service; or where Medicaid (or a Medicaid demonstration project approved under section 1115) paid all or part of the individual's premiums, co-payments and/or cost-sharing. Because our methodology is based upon Medicaid payment for an encounter, and because we believe it will be difficult or impossible for EPs and eligible hospitals to distinguish between payment that is due to patients receiving medical assistance under Title XIX and payment that is due to expansion populations (who are not receiving Title XIX medical assistance), we will allow providers to include in the patient volume calculation individuals who are part of expansion populations under section 1115(a)(2) of the Act. The statute confers broad authority on the Secretary to establish the methodology that is used to estimate the patient volume percentage. Thus, although individuals in section 1115(a)(2) demonstrations are not receiving Title XIX medical assistance, we use our broad authority to allow a methodology that considers these individuals in the estimate that is used. (Limited to Medicaid patient volume determinations, the same reasoning would not apply to CHIP demonstrations or to State-only programs, because no Title XIX funding is received for these projects. However, in calculating Needy Individual patient volume, it is permissible to consider Medicaid or CHIP demonstration projects approved under section 1115.) Our above discussion noting what will be considered a patient encounter includes encounters which were paid for with Title XIX funds under a section 1115 Medicaid demonstration.

Comment: Several commenters asked that CMS allow CHIP patients to be considered in the Medicaid patient volume requirements, particularly for pediatricians.

Response: The requirement that the methodology for estimating Medicaid patient volume is based on Medicaid and not CHIP is related to the statutory language at section 1903(t)(2)(A)(i)–(ii)). Such language requires that the Secretary establish a methodology that can be used to estimate "Medicaid" patient volume for those individuals receiving medical assistance under Title XIX. However, the statute at 1903(t)(2)(A)(iii) allows for an EP practicing predominantly in an FQHC or RHC to consider CHIP patients under the needy individual patient volume requirements.

After consideration of these public comments, we are making no further revisions to this section of the rule.

Comment: Many commenters urged CMS to allow practice- or clinic-level patient volume data to apply to practitioners as a proxy to establish patient volume. This would apply for both Medicaid and needy individual patient volume calculations. The commenters stated that many clinics and group practices do not necessarily track the pay or data per EP and it would be very disruptive to their current practice to begin collecting data like this.

Response: We agree with commenters and acknowledge that it is not our intent to disrupt the practice with new additional burdens, but rather to leverage efficiencies. We will allow clinics and group practices to use the practice or clinic Medicaid patient volume (or needy individual patient volume, insofar as it applies) and apply it to all EPs in their practice under three conditions: (1) The clinic or group practice's patient volume is appropriate as a patient volume methodology calculation for the EP (for example, if an EP only sees Medicare, commercial, or self-pay patients, this is not an appropriate calculation); (2) there is an auditable data source to support the clinic's patient volume determination; and (3) so long as the practice and EPs decide to use one methodology in each year (in other words, clinics could not have some of the EPs using their individual patient volume for patients seen at the clinic, while others use the clinic-level data). The clinic or practice must use the entire practice's patient volume and not limit it in any way. EPs may attest to patient volume under the individual calculation or the group/clinic proxy in any participation year. Furthermore, if the EP works in both the clinic and outside the clinic (or with and outside a group practice), then the clinic/practice level determination includes only those encounters associated with the clinic/practice.

We have revised our regulations to make clear that when patient volume is calculated on a group-practice/clinic level, the above rules will apply.

Comment: Similar to the last comment, we received comments requesting clarification on how the patient volume requirements will apply in States with seamless eligibility determinations and payments for their program. For example, some States have streamlined their programs so that the potential beneficiary is applying for any public health care program for which they might be eligible (for example, Medicaid, CHIP, State-only) in one application. Often these States have one enrollment card as well. In other words, it is likely that both the beneficiary and the health care provider might have no indication as to whether the beneficiary is receiving assistance under Title XIX, Title XXI, or State-only funds. This becomes a problem when attempting to determine if the provider meets the patient volume requirements.

Response: If there is a combined program like the one in the example, this does not mean that all the encounters are being paid for with Title XIX funds (or the individual's premium or cost-sharing is funded through Title XIX), which is how we explained we would determine Medicaid patient encounters. We do not believe it would be reasonable to allow an encounter that is paid for with Title XXI or State-only funds to be considered a "Medicaid encounter." Thus, States with combined programs (for example, Medicaid/CHIP expansion programs), may indeed have difficulty determining who is eligible

for participation in this incentive program.

Considering these States have made enormous strides to reduce the confusion and burden associated with eligibility and payment for these programs, and also to reduce the stigma sometimes associated with Medicaid, we want to support the work they have done.

After consideration of the public comments received, we believe that the best course of action is to work with these States on a case-by-case basis through providing guidance as they develop the SMHP. We believe that each State will have different data and information available to them. The States should make sure that the health IT coordinators are working closely with the Medicaid (and CHIP, as it pertains to this program) policy staff on all aspects of the program. The goal will be to find a solution that leverages the State's existing and/or future data sources, as well as looking for flexible alternatives, while still honoring Congress' intent for the patient volume requirements, as established in the statute.

Comment: Some commenters pointed out that not all Medicaid providers use an EHR or submit electronic claims, making it tedious to capture a numerator and denominator for patient volume until the providers have adopted an EHR. Additionally, some commenters expressed concern about how providers would determine the denominator for patient volume and how States would audit the resulting percentage.

Response: While the commenters may be correct about the assertion that not all providers use an EHR or submit electronic claims, we do not believe it will prevent EPs and eligible hospitals from participating. These providers are businesses and there is an expectation that they are tracking their receivables from all entities (including Medicaid) associated with specific patients. In other words, we do not see a connection between electronic claims and current EHR use and calculation of the patient volume. Furthermore, when EHRs are used with practice management systems, we believe that in most cases, this data should be derived from the electronic systems.

When States consider their audit strategies, they should leverage existing data sources to the extent possible, but also consider future data sources. Part of the Medicaid Information Technology Architecture (MITA) principles associated with the SMHP development includes consideration of the "as is" world, as well as the "to be" world. While States may not have the systems in place today for a complete picture, we expect a longer-term strategy leveraging better data systems.

After consideration of the public comments received, we are not making any change on the basis of this comment. We provided additional flexibility in the patient volume requirements, which may help providers more easily calculate their patient volume and provide for flexibility when States begin to audit providers.

Comment: Commenters requested clarification on how to determine eligibility for the five types of Medicaid EPs. Commenters also noted that there was a potential difference between Medicare and Medicaid for the definition of "physician." Finally, other commenters were confused if, as a specialty practitioner, they qualified as one of the EP types.

Response: We agree with the commenters that there is a distinction between the Medicare and Medicaid definitions of physician. The Medicare statute at section 1848(o)(5)(C) defines an eligible professional as including all the professionals listed in section 1861(r) of the Act (which, generally stated, includes podiatrists, chiropractors and optometrists), the Medicaid statute does not incorporate all of 1861(r). Rather, the Medicaid statute defines what are physician services for purposes of qualifying as medical assistance under section 1905(a)(5)(A) of the Act, and states that physician services constitutes services furnished by a physician as defined in section 1861(r)(1) (which includes only doctors of medicine or osteopathy legally authorized to practice medicine and surgery by their State). In addition, section 1905(e) permits States the option to consider optometrist services as physician services. In this case, the State plan must specifically provide that the term "physicians' services" includes services of the type which an optometrist is legally authorized to perform.

Thus, in keeping with the statute, a physician would be limited to doctors of medicine or osteopathy legally authorized to practice in their State, and, in cases where States have specifically adopted the option of 1905(e) in their State plans, optometrists.

In addition, States would need to refer to their own scope of practice rules to determine whether an individual qualifies as providing dental, nurse practitioner, physician assistant, or certified nurse midwife services. Also, States and EPs would need to refer to CMS regulations. These regulations, at 42 CFR 440.60 require that practitioners be licensed and that they are within the scope of practice defined under State law (see also 1905(a)(6)). 42 CFR 440.100(b), defines a dentist as an individual licensed to practice dentistry or dental surgery in his or her State. 42 CFR 440.165 defines a nurse midwife as a registered professional nurse who meets the following requirements: (1) Is currently licensed to practice in the State as a registered professional nurse; (2) is legally authorized under State law or regulations to practice as a nurse-midwife, (3) has completed a program of study and clinical experience for nurse-midwives as specified in the State, unless the State does not specify such a program. (4) In the case where the State has not specified a particular program of study and clinical experience, the regulation provides alternative means for demonstrating this training. *See* also section 1905(a)(17), defining certified nurse midwife with reference to section 1861(g). 42 CFR 440.166 contains a definition of what qualifies as nurse practitioner services and requires a nurse practitioner to be a registered professional nurse who meets the State's advanced educational and clinical practice requirements, if any, beyond the 2 to 4 years of basic nursing education required of all registered nurse. States will have a Medicaid State Plan (and often State regulations) that designates how each provider is eligible to participate in the Medicaid program by practice type. All of these practitioners must meet all other eligibility requirements (including Medicaid patient volume) in order to participate.

Regarding the confusion by some specialty providers (for example, advanced practice nurses, pediatricians, physician sub-specialties, etc.), so long as an EP qualifies as a practitioner within the State's scope of practice rules for each of the five EP types, they are eligible for this program. In other words, since pediatricians are physicians, they must meet the physician scope of practice rules and then they may be eligible for an incentive when they meet all other requirements. Advanced practice nurses who meet their State's criteria for qualifying as a nurse practitioner would qualify as nurse practitioners. We believe most States would recognize APNs as NPs within their scope of practice rules. Eligible provider types must be specified in a State's SMHP.

After consideration of the public comments received, we are revising the definition of these EPs under section

495.304 to clarify additional scope of practice requirements.

Comment: Commenters requested clarification on how full- or part-time status impacts an EP's eligibility for incentives.

Response: Full or part-time status does not affect patient volume calculations or whether an EP's practice is predominantly in an FQHC or RHC. There is no mention of requisite number of hours in the statute or this final rule as a pre-condition for eligibility.

After consideration of the public comments received, we are not making any revisions to this section of the final rule.

e. Entities Promoting the Adoption of Certified EHR Technology

We define "promoting the adoption of certified EHR technology" in § 495.302. Under section 1903(t)(6)(A)(i), incentive payments must generally be made directly to the EP. Section 1903(t)(6)(A)(ii) of the Act provides an exception to permit payment of incentive payments to "entities promoting the adoption of certified EHR technology," as designated by the State, if participation in the payment arrangement is voluntary for the EP involved. Additionally, the entity must not retain more than 5 percent of the payment for costs unrelated to certified EHR technology (and support services including maintenance and training) that is for, or is necessary for, the operation of the technology. While the Act authorizes States to designate these entities, the Secretary nevertheless retains authority to define what it means to be "promoting the adoption of certified EHR technology," as specified in section 1903(t)(6)(A)(ii) of the Act. Section 1102 of the Act authorizes the Secretary to "make and publish such rules and regulations, not inconsistent with this Act, as may be necessary to the efficient administration of the functions with which he or she is charged under this Act." Since one of our functions is to approve Title XIX plans under sections 1902(b) and 1116 of the Act, and States would need to submit plans as to how they would spend section 4201 of the HITECH Act funds, we have the authority to determine whether a State's plan for allowing EPs to assign their Medicaid incentive payments to these entities is in compliance with our interpretation of the Act.

We define "promoting" certified EHR adoption to mean the enabling and oversight of the business, operational and legal issues involved in the adoption and implementation of EHR and/or exchange and use of electronic health information between participating providers, in a secure manner, including maintaining the physical and organizational relationship integral to the adoption of certified EHR technology by EPs. Under 1903(t)(6)(A)(ii) of the Act and as proposed in § 495.332, States must establish verification procedures that enable Medicaid EPs to voluntarily assign payments to entities promoting EHR technology. States must guarantee that the assignment is voluntary and that the entity does not retain more than 5 percent of those assigned Medicaid incentive payments for costs unrelated to certified EHR technology. We proposed requiring States to publish and make available to all Medicaid EPs the procedures they developed for assigning incentive payments to the third party entities before payments can be assigned. Such publication must also include information about the State's verification mechanism. The State's method must assure compliance with the requirement that no more than 5 percent of the Medicaid EP's annual incentive payment is retained by the entity for costs not related to certified EHR technology.

Although section 1903(t)(6)(A)(ii) of the Act allows assignment of payment to entities promoting the adoption of EHR technology, we wish to clarify that such assignment would not remove the responsibility of the Medicaid EP to individually demonstrate meaningful use of the EHR technology (as discussed in greater detail below). Therefore, entities promoting the adoption would not receive the assigned payments unless the Medicaid EP meets all eligibility criteria. Our definition for promoting the adoption of certified EHR technology is in § 495.302.

Comment: A commenter recommended that CMS require that entities designated by States that promote the adoption of EHR technology must use qualified EHR technology and be able to capture, query and/or exchange data from beyond a practice or closed system in order to foster interoperability, and to promote competition among EHR vendors with vendor-neutral and provider-neutral solutions. The commenter recommended that entities that promote the adoption of certified EHR technology be certified to an electronic hub that permits the exchange of electronic structured data on a provider-neutral basis.

Commenters also requested that the Regional Extension Centers funded by ONC be permissible as entities designated by the State to be eligible to receive EPs assigned incentive payments.

Response: States will have the discretion to identify entities that promote the adoption of certified EHR technology in accordance with our definition in regulation. We do not agree that the definition of "promotion of the adoption of EHR technology" requires the designated entity itself to utilize certified EHR technology. A variety of entities might offer services that meet the language included in this final rule defining promoting EHR adoption. We wish to point out that there is also a discussion of reassignment of payments in Section II.B.1.d. of this rule.

After consideration of the comments, we are adopting the language as written with the additional clarification that we encourage States to consider how they will verify on an ongoing basis that the entities that they designate are in fact promoting EHR adoption, per the requirements. Their responsibility to audit this element might be a factor in identifying which entities they wish to designate, in terms of tangible EHR promotion activities.

We agree that our definition of "promoting EHR adoption" does not preclude the ONC-funded Regional Extension Centers from being designated by States for this role.

4. Computation of Amount Payable to Qualifying Medicaid EPs and Eligible Hospitals

The statute, at sections 1903(t)(1), (t)(4), and (t)(5) of the Act, creates different payment formulas for Medicaid EPs versus hospitals. The payment methodology for Medicaid hospitals shares many aspects of the methodology used for Medicare hospitals.

a. Payment Methodology for EPs

(1) General Overview

Pursuant to section 1903(t)(1)(A) of the Act, payment for EPs equals 85 percent of "net average allowable costs." While the Secretary is directed to determine "average allowable costs" based upon studies of the average costs of both purchasing and using EHR technology, the net average allowable costs that set payment are capped by statute. As discussed in more detail further on, generally stated, these caps equal $25,000 in the first year, and $10,000 for each of 5 subsequent years (there is an exception for pediatricians with under 30 percent Medicaid patient volume, whose caps are two-thirds of these amounts). Thus, the maximum incentive payment an EP could receive from Medicaid equals 85 percent of $75,000, or $63,750, over a period of 6 years. EPs must begin receiving

incentive payments no later than CY 2016.

(2) Average Allowable Costs

Section 1903(t)(4)(C) of the Act gives the Secretary the authority to determine average allowable costs. Specifically, the Secretary is directed to study the average costs associated with the purchase, initial implementation, and upgrade of certified EHR technology, including support services, and integral related training. The Secretary also is directed to study the average costs of operating, maintaining, and using certified EHR technology. The statute permits the Secretary to use studies submitted by the States.

We conducted a literature review of recent studies on EHR technology to determine the average allowable cost of implementing and using such technology. We reviewed the results from four recent, comprehensive studies.

In conducting a review of the data, we determined that the studies demonstrate a cross-sectional view of small and large practices and community health centers. There was adequate data to support a depiction of costs across multiple provider types.

To summarize, we determined that the average costs of EHRs vary greatly because of the size and type of provider practices, the differences in available features of systems, and the additional costs associated with licensing, support, training, and maintenance. However, based on the information reviewed, we determined that the average costs for initial EHR systems currently can range from $25,000 to $54,000 in the implementation year, per professional. Since the average costs of EHR technology in the first year can be as much as $54,000 and no less than $25,000, and since we believe the costs of such technology will be increasing, we set the average allowable cost at $54,000. We established this average allowable cost at the high end of the range since the data we reviewed is based on certification criteria that may not be appropriate moving forward. Specifically, since the ONC is establishing new certification criteria for EHR technology, we believe the average cost of certified EHR technology incorporating the new criteria will be higher than the current costs of EHR technology. It is our assumption that making improvements to incorporate the new certification standards into current EHR technology will be costly. Thus, we believe that establishing the average allowable cost at $54,000 is reasonable.

Additionally, our analysis determined that the range for subsequent incentive payment year costs for most providers will fall into a large range, based on a number of factors. On one end of the range, costs related to maintenance could be as low as $3,000 to $9,000 per provider, where other studies state that maintenance will be as high as $18,000 to $20,610 per provider. Given the requirements in the ONC interim final rule for the adoption of an initial set of standards, implementation specifications, and certification criteria for EHRs and the health measures data discussed in this final rule that CMS and the States will need to collect from professionals, we believe that the costs for maintaining certified EHR technology will also be on the higher end of the range at $20,610.

(3) Net Average Allowable Costs.

As originally required by section 1903(t)(3)(E) of the Act, in order to determine "net" average allowable costs, average allowable costs for each provider must be adjusted in order to subtract any payment that is made to Medicaid EPs and is directly attributable to payment for certified EHR technology or support services of such technology. The only exception to this requirement is that payments from State or local governments do not reduce the average allowable costs. The resulting figure is the "net" average allowable cost, that is, average allowable cost minus payments from other sources (other than State or local governments). The statute indicates that EPs may receive 85 percent of a maximum net average allowable cost in the first year of $25,000 and a maximum net average allowable cost of $10,000 in subsequent years. This would mean that, as required by the statute, the net average allowable costs are capped at these amounts.

Since we set the average allowable cost at $54,000 in the first year, EPs could receive as much as $29,000 in funding from sources (other than from State or local governments) as contributions to the certified EHR technology and the incentive payment would still be based on 85 percent of the maximum net average allowable cost of $25,000 (or $21,250). This is appropriate since $54,000 (the average allowable cost) minus $29,000 (contributing sources of funding from other than State or local governments) equals $25,000. Since $25,000 is equal to the level of the maximum net average allowable cost or capped amount discussed above, providers could receive 85 percent of $25,000 or $21,250 in year one as a Medicaid incentive payment.

The same logic would hold true for subsequent years. Specifically, if in the following years an eligible professional received as much as $10,610 in contributing funds from sources other than State or local governments, the maximum incentive payment of $8,500 would be unaffected in such subsequent years. This result is due to the fact that the average allowable costs of $20,610 for maintaining EHR technology minus the $10,610 received would still equal $10,000, the maximum net average allowable costs permitted under the statute.

In reviewing whether a reduction in the net average allowable cost was warranted based on other contributions to EHR technology, we considered the situation of EPs who may have been provided with the actual certified EHR technology, as well as training, support services, and other services that would promote the implementation and meaningful use of such technology. In some cases, we do not believe the contribution would reduce average allowable costs at all. For example, if an FQHC or RHC has provided technology to its staff EPs to use, we do not believe that such technology provision would be considered a "payment" from another source that would reduce average allowable costs. Moreover, we believe the situations in which an EP has been provided with the actual technology, support service, or training from another source are extremely limited in light of the statutory prohibitions on "kickbacks" at Section 1128B(b) of the Act.

Comment: Several commenters are concerned that States are required to develop a method to determine the payment amount for each provider. Commenters believed that incentive payments should be based on the maximum amount and that individual calculations are cumbersome and a difficult process for both States and eligible professionals.

Response: We would like to clarify the requirements in the statute and the process by which incentive payments will be established. Specifically, the Secretary is directed to study the average costs associated with the purchase, initial implementation, and upgrade of certified EHR technology, including support services, and integral related training. The Secretary is also directed to study the average costs of operating, maintaining, and using certified EHR technology. The statute permits the Secretary to use studies submitted by the States. CMS conducted a literature review of recent studies on EHR technology to determine the average allowable cost of implementing

and using such technology. CMS reviewed the results from four recent, comprehensive studies and determined that these costs are $54,000 per professional. We recognize that this cost is variable and since the ONC is establishing certification criteria for EHR technology, we believe this cost is reasonable since we expect that current EHR technology will need to be upgraded in order to meet the new certification criteria.

Next, in accordance with the statute, in order to determine the net average allowable costs for each provider, average allowable costs for each provider must be adjusted in order to subtract any payment that is made to Medicaid eligible professionals and is directly attributable to payment for certified EHR technology or support services of such technology. The only exception to this requirement, as discussed above, is that payments from State, or local governments do not reduce the average allowable costs. The resulting figure is the net average allowable costs. The statute further indicates that Medicaid eligible professionals can receive up to 85 percent of a maximum of the net average allowable cost. In year one the maximum net average allowable cost is $25,000 and in subsequent years is $10,000. Additionally, the statute indicates that Medicaid eligible professionals are responsible for the remaining 15 percent of the net average allowable cost (1903(t)(6)(B)). We believe the commenters are concerned with the 85 percent of net average allowable cost maximum incentive payment amount and the responsibility of the Medicaid professional for the remaining 15 percent of the net average allowable cost.

Since the statute is clear that to get to the net average allowable cost, payments made to the EP that are directly attributable to the payment for certified EHR technology or support services for such technology for each provider have to be subtracted from the average allowable cost, this must be an individual provider calculation. We do not believe we have discretion to change this netting process directed by the Congress. We have provided an example calculation so that in using the average allowable cost established by the Secretary of $54,000 professionals could receive as much as $29,000 in payments from outside sources and still receive 85 percent of the maximum capped net average allowable cost of $25,000. We have also required that States must have a process in place and a methodology for verifying that payment incentives are not paid at amounts higher than 85 percent of the net average allowable cost and a process in place and a methodology for verifying that professionals pay 15 percent of the net average allowable cost of the certified EHR technology.

States may wish to establish a process whereby individuals attest to having completed their forms correctly and risk the circumstance of audit in the event the State has reason to believe individuals did not complete the forms appropriately. States could develop a process for providers to attest to having received no other sources of funding from other than State and local governments as payment that is directly attributable to the cost of the technology. States could select a random sample of providers to audit after the incentive payment has been paid. Additionally, States could determine that certain types of providers should be selected for a more extensive review since it may be true that this particular provider group was most likely to have received payment for certified EHR technology from sources other than State, or local governments. This process could eliminate some of the burden.

Comment: Commenters also asked that we provide some examples of the costs that must be subtracted to get to the net average allowable cost and therefore the incentive payment amount. Commenters do not want to be penalized because they did not have a fair chance at understanding the rule before participating in the program. Commenters further argued that reducing incentive payments due to other non-State/local resources could immobilize innovation and temper research activities.

Response: When States begin to think through the payments that are not considered acceptable and that must be subtracted from the average allowable cost to get to the net average allowable costs and consequently, the incentive payment, we believe that States should consider the situation in which professionals may have been provided with the certified EHR technology through, for example, an employer/employee relationship. We do not believe in this case that there could be any payments directly attributable to the professional for the certified EHR technology; therefore, there are no payments that must be subtracted. This situation would apply in the case of clinics like FQHCs/RHCs or IHS facilities. Additionally, States should consider that any in-kind contributions such as EHR technology or free software provided by vendors are not cash payments and therefore are also not costs that must be subtracted. Further, in the case of grants like the HRSA Capital Improvement Program grants that are used to finance many projects within an organization; for example, research projects, infrastructure, construction or repair and renovation of health centers, health care services, etc., we do not believe these grants are directly attributable as payments for the certified technology but rather are payments for several projects of the organization. Again, we do not believe that these costs are directly attributable to payment costs for the certified technology and therefore must be subtracted. These are just some examples but the clarifying point is that any costs that are subtracted from the average allowable cost to get to the net average allowable cost have to be cash payment that is "directly attributable to the professional for the certified EHR technology." Aside from specific costs related to computer hardware, software, staff training, and/or upgrades of the technology, we believe there are limited situations that exist in which cash payment has been made that is directly attributable to the professional solely for the purpose of certified EHR technology.

In any case, we are requiring that States submit to CMS for review and approval a description of their process and methodology for verifying payment incentives in State Medicaid HIT plans. CMS has the flexibility to approve State Medicaid HIT plans that require provider attestation initially with subsequent auditing of either a random sample, or a sample of payment incentive recipients most likely to have received funding from other sources.

We also would like to provide clarifying information concerning the responsibility of the professional for 15 percent of the net average allowable cost. Section 1903(t)(6)(B) of the Act dictates that EPs are responsible for payment of the remaining 15 percent of the net average allowable cost and States are responsible for ensuring that the Secretary pays no more than 85 percent of the net average allowable cost as incentive payments. In ensuring EPs' responsibility for the remaining 15 percent, we believe States may consider funding that the EP receives from other sources as essentially meeting the EPs responsibility. For example, as stated earlier, States should consider the previous examples of employer/employee relationship, certain grants, and in-kind contributions. Specifically, if a professional is an employee at an FQHC/RHC or IHS facility, since the employer has provided the technology to the employee it is assumed that the employer has contributed the 15 percent

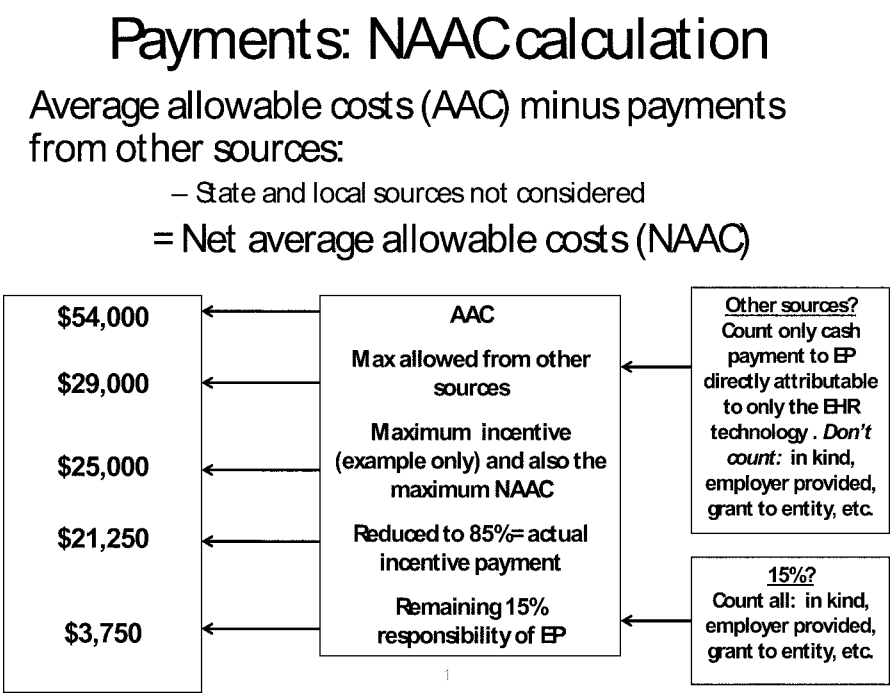
to the net average allowable cost on behalf of the employee. Additionally, in the case of in-kind contributions, the professional's 15 percent responsibility to the net average allowable cost is of no consequence since the entity has assumed that responsibility for the professional. It should be noted that in the case of a vendor supplying the 15 percent on behalf of the EP because the technology, training, support services, etc. was either in-kind contributions or free, conflict of interest safeguards apply and the parties should be mindful of the requirement to comply with applicable fraud, waste, and abuse laws, rules, and regulations.

In those cases in which the professional himself must satisfy the responsibility for the 15 percent net average allowable costs, we believe in determining the calculation, States should consider costs related to the providers' efforts to address workflow redesign and training to facilitate meaningful use of EHRs as contributing to the providers' 15 percent share.

Considering the costs of training, preparing for, and installing or upgrading EHR technology, we believe the vast majority of EPs will spend, or receive funding from other sources in the amount of 15 percent of the maximum net average allowable cost (or $3,750 in the first year and $1,500 in subsequent years). We also believe that for providers' first payment for having adopted, implemented or upgraded certified EHR technology, States should take into consideration providers' verifiable contributions up through the date of attestation. For example, if a provider adopted EHR technology for $100 in January 2010 and then paid for the upgrade to the newly certified version for an additional $100 in December of 2010, the sum of both investments; that is, $200, should be applicable to their 15 percent of the net average allowable cost.

In summary, in response to these comments, we are clarifying in the final rule that State Medicaid HIT plans must explain the process and methodology States will put in place to ensure that Medicaid eligible professionals comply with this responsibility (see section 495.332). Additionally, we have clarified the rules at section 495.310 that providers are responsible for 15 percent of the net average allowable costs of the certified EHR technology.

The following chart is useful in depicting the effect of this calculation.



Comment: Several commenters have raised questions about the cost of the certified EHR technology for hospitals. Specifically, commenters believed that $54,000 is identified as the initial costs for providers with 20 percent per year thereafter for ongoing costs; and $5 million for initial costs for hospitals with 20 percent per year thereafter for ongoing costs. The commenters believed that the $54,000 assumption for providers may be accurate; however, the $5 million assumption for hospitals could be off by a factor of 4 or 5. Other commenters believed that even the $54,000 assumption seriously underestimates the total cost of ownership for EHR systems and their ongoing expenses and argued that this assumption does not account for the training and labor costs associated with implementation of an EHR system, nor does it account for the lost revenues resulting from the decreases in productivity during the initial implementation phase. One commenter questioned whether the $54,000 average allowable cost for certified EHR technology takes into account leasing of an ASP (applicable service provider web based) model as an allowable cost.

Response: As explained above, we conducted a literature review of recent studies on EHR technology and determined that these costs are $54,000 per professional. We are not establishing an average allowable cost for hospitals. The reference to the costs of EHRs for hospitals was only to make the point that the costs of EHRs vary greatly because of the size and type of provider practices, differences in available features of systems, and the additional costs associated with licensing, support, training and maintenance. Additionally, there is no reason to establish the average allowable costs of EHR technology for hospitals since the hospital incentive payments are based on a formula that is defined in the statute and that does not rely on the

average allowable cost. In terms of the $54,000 average allowable cost figure, we indicated that we believe this is a reasonable figure but recognize that there are many variables to determining the average allowable cost of certified EHR technology because of practice size, the differences in available features of systems, and the additional costs associated with licensing, support, training and maintenance. The $54,000 average allowable cost figure does take into account web based models since the Secretary is tasked to study the average costs associated with the purchase, initial implementation, and upgrade of certified EHR technology, including support services, and integral related training.

We are making no additional revisions to this section of the final rule as a result of this comment.

Comment: One commenter requested that CMS make clear that any funding an FQHC receives because the Medicaid eligible professional voluntarily chooses to reassign his/her incentive payment or any funds the center may have received through HRSA Capital Improvement Funds cannot be the basis for a State reducing its per visit payment to FQHCs required under Section 1902(bb).

Response: We agree with the commenter with respect to the incentive payments authorized under section 1903(t); however, we are not addressing the HRSA Capital Improvement funds, as this funding is outside the scope of this rulemaking. Since FQHCs are not eligible providers, incentive payments will not be made to FQHCs. It is true, however, that an eligible professional could choose to reassign his/her incentive payment to the FQHC. Any reassignment of payments must be consistent with applicable laws, rules, and regulations, including, without limitation, those related to fraud, waste, and abuse. Incentive payments are payments designed to promote the adoption and meaningful use of certified EHR technology and are not payments for medical assistance provided in the FQHC. We do not have the authority under this program to provide that these funds be the basis for the State to reduce its per visit payment to the FQHC.

After consideration of this comment, we are making no further additions to this section of the final rule.

(4) Payments for Medicaid Eligible Professionals

One important difference we proposed between the payments to Medicaid EPs and hospitals is that States would disburse the payments to EPs in alignment with the calendar year, whereas hospitals will receive payments in alignment with the fiscal year, as described in section II.D.4.b. of this final rule. There are two primary reasons for this. The first is to align Medicaid incentive payment disbursements with that of the Medicare program, in order to support consistency between the two programs, as well as among the States. We will undertake national outreach activities to encourage provider EHR adoption and to align the annual payment periods.

As previously discussed in this final rule, based on the 85 percent threshold applied to the net average allowable costs, we proposed that most Medicaid EPs may receive up to a maximum incentive payment of $21,250 in the first payment year.

In subsequent years of payment, Medicaid EPs' incentive payments will be limited to 85 percent of the $10,000 cap on net average allowable cost, or up to a maximum of $8,500 annually for most Medicaid EPs.

Since pediatricians are qualified to participate in the Medicaid EHR incentive program as physicians, and therefore classified as Medicaid EPs, they may qualify to receive the full incentive (that is, the 85 percent threshold applied to the net average allowable cost) if the pediatrician is not hospital-based and can demonstrate that they meet the minimum 30 percent Medicaid patient volume requirements discussed in this subpart.

Pediatricians who are not hospital-based, and have a minimum of 20 percent of their patient encounters paid by Medicaid are also encouraged to participate in the Medicaid EHR incentive program. The maximum payment amount for these pediatricians, who meet the 20 percent Medicaid patient volume, but fall short of the 30 percent patient volume, is reduced to two-thirds of the net average allowable cost, subject to the 85 percent threshold. The reduction accounts for the reduced patient volume, but the intent is to offer an incentive to attract pediatricians to participate. This means pediatricians with a minimum 20 percent patient volume may qualify for up to a maximum of $14,167 in the first incentive payment year and to up a maximum of $5,667 in the 5 subsequent incentive payment years, or no more than $42,500 over the maximum 6 year period.

TABLE 16: Maximum Incentive Payment Amount for Medicaid Professionals

Cap on Net Average Allowable Costs, per the HITECH Act	85 percent Allowed for Eligible Professionals	Maximum Cumulative Incentive over 6-year Period
$25,000 in Year 1 for most professionals	$21,250	
$10,000 in Years 2-6 for most professionals	$8,500	$63,750
$16,667 in Year 1 for pediatricians with a minimum 20 percent patient volume, but less than 30 percent patient volume, Medicaid patients	$14,167	
$6,667 in Years 2-6 for pediatricians with a minimum 20 percent patient volume, but less than 30 percent patient volume, Medicaid patients	$5,667	$42,500

All State Medicaid EHR incentive program calculations, payments, and limits under this section are subject to our review.

Comment: Commenters suggested that CMS apply the health professional shortage area (HPSA) bonus offered under Medicare to Medicaid providers.

Response: There is no statutory authority for HPSA bonuses in the Medicaid incentive program. However, it is worth noting that in comparing the maximum participation period for EPs in Medicare and Medicaid, EPs can earn higher total incentive payments under Medicaid, even when compared to the Medicare payments with the HPSA bonus.

We are not making any changes to this rule as a result of this comment.

Comment: Commenters requested clarification on how the Medicare payment adjustments apply to Medicaid providers. Commenters suggested that if these apply to Medicaid providers, it could be a reason not to participate. One commenter asked about a provider who began in the Medicare incentive program and then switched to Medicaid, but then stopped meaningfully using the certified EHR.

Response: The Medicaid program does not have the payment adjustments that apply, beginning in 2015, in the Medicare program. However, all Medicare providers will have a payment reduction in 2015 if they are not demonstrating meaningful use, regardless of whether they participate in the Medicare or Medicaid EHR incentive program. Whether an EP, hospital or CAH is a meaningful user of certified EHR technology will continue to be determined on a year-by-year basis. A provider who stops meaningfully using certified EHR cannot receive an incentive payment. This is discussed in greater detail in II.A.

We are not making any changes to this rule as a result of this comment.

(5) Basis for Medicaid EHR Incentive Program First Payment Year and Subsequent Payment Years

(i) Medicaid EP Who Begins Adopting, Implementing or Upgrading Certified EHR Technology in the First Year

A Medicaid EP who begins by adopting, implementing, or upgrading certified EHR technology in the first year will be eligible for the incentive payments not in excess of the maximum amount. Under section 1903(t)(4) of the Act he or she is eligible to receive up to the maximum first year Medicaid incentive payments discussed in the previous sections, plus additional incentive payments for up to 5 years for demonstrating meaningful use of certified EHR technology. In other words, these providers may participate in the Medicaid EHR incentive program for up to 6 years.

Table 17 demonstrates the payment scenarios available to a Medicaid EP who begins in their first year by adopting, implementing, or upgrading certified EHR technology, and receives all six years of payments consecutively. As can be seen from the table, the EP can begin receiving payments as late as 2016, and still receive up to the maximum payments under the program.

TABLE 17: Payment Scenarios For Medicaid EPs Who Begin Adoption in the First Year

Calendar Year	Medicaid EPs who begin adoption in					
	2011	2012	2013	2014	2015	2016
2011	$21,250	----------	----------	----------	----------	----------
2012	$8,500	$21,250	----------	----------	----------	----------
2013	$8,500	$8,500	$21,250	----------	----------	----------
2014	$8,500	$8,500	$8,500	$21,250	----------	----------
2015	$8,500	$8,500	$8,500	$8,500	$21,250	----------
2016	$8,500	$8,500	$8,500	$8,500	$8,500	$21,250
2017	----------	$8,500	$8,500	$8,500	$8,500	$8,500
2018	----------	----------	$8,500	$8,500	$8,500	$8,500
2019	----------	----------	----------	$8,500	$8,500	$8,500
2020	----------	----------	----------	----------	$8,500	$8,500
2021	----------	----------	----------	----------	----------	$8,500
TOTAL	$63,750	$63,750	$63,750	$63,750	$63,750	$63,750

(ii) Medicaid EP who has Already Adopted, Implemented or Upgraded Certified EHR Technology and Meaningfully Uses EHR Technology

For a Medicaid EP who has already adopted, implemented, or upgraded certified EHR technology and can meaningfully use this technology in the first incentive payment year, we proposed that the Medicaid EP be permitted to receive the same maximum payments, for the same period of time, as the Medicaid EP who merely adopted, implemented or upgraded certified EHR technology in the first year. Section 1903(t)(6)(C)(ii) of the Act states that for a Medicaid EP or hospital who has completed "adopting, implementing, or upgrading" certified EHR technology "prior to the first year of payment * * * clause (i)(I) shall not apply and clause (i)(II) [discussing the demonstration of meaningful use] shall apply to each year of payment to the Medicaid provider under this subsection, including the first year of payment." We believe this provision supports an interpretation that a Medicaid EP who has already adopted certified EHR technology, would still receive a "first year" of payment under section 1903(t)(4) of the Act, and like all other first years of payment, this payment could not exceed $21,250. Then, under section 1903(t)(4)(A)(ii) and (iii) of the Act, such Medicaid EPs could receive an additional 5 years of payment for subsequent years of payment, with payments not exceeding $8,500 in each of these 5 subsequent years. This approach allows early adopters of certified EHR to begin

meaningfully using technology, without being at a competitive disadvantage, and without losing incentive payments for the previous costs associated with adopting, implementing, or upgrading certified EHR technology.

Thus, the maximum incentive payments for Medicaid EPs demonstrating that they are meaningful users in the first payment year, would be identical to the maximum payments available to those demonstrating adoption, implementation, or upgrading certified EHR technology in the first year, as depicted in Table 18.

TABLE 18: Maximum Incentive Payments for Medicaid EPs Who Are Meaningful Users in the First Payment Year

	Medicaid EPs who begin meaningful use of certified EHR technology in--					
Calendar Year	2011	2012	2013	2014	2015	2016
2011	$21,250	----------	----------	----------	----------	----------
2012	$8,500	$21,250	----------	----------	----------	----------
2013	$8,500	$8,500	$21,250	----------	----------	----------
2014	$8,500	$8,500	$8,500	$21,250	----------	----------
2015	$8,500	$8,500	$8,500	$8,500	$21,250	----------
2016	$8,500	$8,500	$8,500	$8,500	$8,500	$21,250
2017	----------	$8,500	$8,500	$8,500	$8,500	$8,500
2018	----------	----------	$8,500	$8,500	$8,500	$8,500
2019	----------	----------	----------	$8,500	$8,500	$8,500
2020	----------	----------	----------	----------	$8,500	$8,500
2021	----------	----------	----------	----------	----------	$8,500
TOTAL	$63,750	$63,750	$63,750	$63,750	$63,750	$63,750

We also requested comment on an alternative approach that would limit the incentive payment for Medicaid EPs who have already adopted, implemented, or upgraded certified EHR technology to 5 years of payment, at a maximum payment of $8,500 per year. We refer readers to our proposed rule (75 FR 1937) for a discussion of this approach.

Medicaid EPs are not required to participate on a consecutive annual basis, however, the last year an EP may begin receiving payments is 2016, and the last year the EP can receive payments is 2021. See our discussion on consecutive versus non-consecutive payments in section II.A. of this final rule. We wish to point out to readers that this is one area where the Medicare and Medicaid incentive payment programs differ. That is, Medicare EPs do not have the same flexibility afforded to Medicaid EPs, who are permitted to participate in a non-consecutive annual basis, or to skip years, in other words, without the omitted years necessarily reducing the total number of years for which they may receive payment. The tables in this section demonstrate how a Medicaid EP would maximize the aggregate incentive under different scenarios, considering that a Medicaid EP may initiate participation in 2011 through 2016. Additionally, these tables do not include the alternative Medicaid maximum incentive payment for pediatricians discussed in the previous section, which is two-thirds of the total amount listed in Tables 27 through 30. Finally, these tables do not represent EPs whose incentive payments may be reduced because net average allowable costs may actually be lower than $25,000 in the first year, or $10,000 in subsequent years, due to payments from other, non-State/local sources.

Comment: Some commenters rejected the alternative scenario (including 5 years of payment instead of 6), as it would effectively result in a penalty for early adopters, and reward those who delayed adoption.

Response: We agree that early adopters should not be penalized. Further, we agree that Medicaid EPs that have adopted EHR technology before the first year should have an opportunity for the same maximum incentive payments as EPs that are meaningful users in the first year. Accordingly, the alternative scenario we presented in Table 30 of the proposed rule will not be used for incentive payments.

As we are adopting our proposed policy as final, we are not making any changes to the regulations as a result of this comment.

b. Payment Methodology for Eligible Hospitals

Statutory parameters placed on Medicaid incentive payments to hospitals are largely based on the methodology applied to Medicare incentive payments. The specifications described in this section are limits to which States must adhere when developing aggregate EHR hospital incentive amounts for Medicaid-eligible hospitals. States will calculate hospitals' aggregate EHR hospital incentive amounts on the FFY to align with hospitals participating in the Medicare EHR incentive program.

States may pay children's hospitals and acute care hospitals up to 100 percent of an aggregate EHR hospital incentive amount provided over a minimum of a 3-year period and a maximum of a 6-year period. Section 1905(t)(5)(D) requires that no payments can be made to hospitals after 2016 unless the provider have been paid a payment in the previous year; thus, while Medicaid EPs are afforded flexibility to receive six years of payments on a non-consecutive, annual basis, hospitals receiving a Medicaid

incentive payment must receive payments on a consecutive, annual basis after the year 2016. Prior to 2016, Medicaid incentive payments to hospitals can be made on a non-consecutive, annual basis. The maximum incentive amounts for these providers are statutorily defined by a formula at section 1903(t)(5)(B) of the Act. The statute requires that Medicaid refer, with some adjustments, to the calculation for the Medicare hospital incentive payment described at sections 1886(n)(2)(A), 1886(n)(2)(C), and 1886(n)(2)(D) of the Act, to determine the aggregate EHR amount allowable for individual hospitals. The aggregate EHR hospital incentive amount is calculated using an overall EHR amount multiplied by the Medicaid share.

States are responsible for using auditable data sources to calculate Medicaid aggregate EHR hospital incentive amounts, as well as determining Medicaid incentive payments to those providers. Auditable data sources include—

- Providers' Medicare cost reports;
- State-specific Medicaid cost reports;
- Payment and utilization information from the State's MMIS (or other automated claims processing systems or information retrieval systems); and
- Hospital financial statements and hospital accounting records.

All State Medicaid EHR incentive program calculations, payments, and limits under this section are subject to our review.

For purposes of the Medicaid EHR hospital incentive program, the overall EHR amount is equal to the sum over 4 years of (I)(a) the base amount (defined by statute as $2,000,000); plus (b) the discharge related amount defined as $200 for the 1,150th through the 23,000th discharge for the first year (for subsequent years, States must assume discharges increase by the provider's average annual rate of growth for the most recent 3 years for which data are available per year): multiplied by (II) the transition factor for each year equals 1 in year 1, ¾ in year 2, ½ in year 3, and ¼ in year 4.

The statute specifies that the payment year is determined based on a Federal fiscal year. Section 1886(n)(2)(C) of the Act provides the Secretary with authority to determine the discharge related amount on the basis of discharge data from a relevant hospital cost reporting period, for use in determining the incentive payment during a Federal fiscal year. Federal fiscal years begin on October 1 of each calendar year, and end on September 30 of the subsequent calendar year. Hospital cost reporting periods can begin with any month of a calendar year, and end on the last day of the 12th subsequent month in the next calendar year. For purposes of administrative simplicity and timeliness, we require that States use data on the hospital discharges from the hospital fiscal year that ends during the Federal fiscal year prior to the fiscal year that serves as the first payment year.

The discharge-related amount is $200 per discharge for discharges 1,150 through 23,000. To determine the discharge-related amount for the 3 subsequent years that are included in determining the overall EHR amount, States should assume discharges for an individual hospital have increased by the average annual growth rate for an individual hospital over the most recent 3 years of available data from an auditable data source. Note that if a hospital's average annual rate of growth is negative over the 3 year period, it should be applied as such.

The overall hospital EHR amount requires that a transition factor be applied to each year. This transition factor equals 1 for year 1, ¾ for year 2, ½ for year 3, and ¼ for year 4, as provided for in sections 1886(n)(2)(A) and 1886(n)(2)(E) of the Act, and as incorporated through section 1902(t)(5)(B) of the Act. We note that although, for purposes of the Medicare incentives, section 1886(n)(2)(E)(ii) of the Act requires a transition factor of 0, if the first payment year is after 2013, we do not believe this rule would apply in the context of the Medicaid incentive payments. Nothing in section 1903(t) of the Act specifically cross references this 0 transition factor, and, notably, section 1903(t) of the Act allows Medicaid incentive payments to begin as late as 2016.

The "Medicaid Share," against which the overall EHR amount is multiplied, is essentially the percentage of a hospital's inpatient, non-charity care days that are attributable to Medicaid inpatients. More specifically, the Medicaid share is a fraction expressed as—

- Estimated Medicaid inpatient-bed-days plus estimated Medicaid managed care inpatient-bed-days;

Divided by;

- Estimated total inpatient-bed days multiplied by ((estimated total charges minus charity care charges) divided by estimated total charges).

As indicated in the above formula, the Medicaid share includes both Medicaid inpatient-bed-days and Medicaid managed care inpatient-bed-days. This is in keeping with section 1903(t)(5)(C) of the Act, which provides that in computing inpatient-bed-days, the Secretary shall take into account inpatient-bed-days that are paid for individuals enrolled in a Medicaid managed care plan under sections 1903(m) or 1932 of the Act. We interpreted these managed care individuals to be individuals enrolled in an managed care organization (MCO), prepaid inpatient health plan (PIHP), or prepaid ambulatory health plan (PAHP) under 42 CFR part 438.

Some Medicaid managed care entities (that is, MCOs, PIHPs, and PAHPs with risk contracts) provide substitute services (or, "in-lieu-of services") in more cost effective or efficient settings than the State plan services in the managed care contract. For example, in a hospital inpatient setting, these services could be in a different unit, such as a sub-acute wing or skilled nursing wing, so long as States and contracting entities are in compliance with the actuarial soundness rules in § 438.6(c), provision of substitute services is allowed. Although we understand that these substitute service days may be used to achieve efficiency and cost effectiveness, we do not believe such substitute service days should count as "inpatient-bed-days" in the hospital EHR incentive payment calculation. The statute requires us to calculate the Medicaid share "in the same manner" as the Medicare share under section 1886(n)(2)(D) of the Act and such substitute service days would not be considered "in the same manner." Thus, we proposed that for purposes of the Medicaid formula, we would count only those days that would count as inpatient-bed-days for Medicare purposes under section 1886(n)(2)(D) of the Act.

In addition, because the formula for calculating the Medicaid share requires a determination of charity care charges, States should use the revised Medicare 2552–10, Worksheet S–10 or another auditable data source to determine the charity care portion of the formula. In the absence of sufficient charity care data to complete the calculation, section 1886(n)(2)(D) of the Act, requires the use of uncompensated care data to derive an appropriate estimate of charity care, including a downward adjustment for bad debts. We interpreted bad debt to be consistent with the Medicare definition of bad debt as promulgated at § 413.89(b)(1).

Finally, per section 1886(n)(2)(D) of the Act, to the extent there is simply not sufficient data that would allow the State to estimate the inpatient bed-days attributable to Medicaid managed care patients, the statute directs that such figure is deemed to equal 0. Likewise, if there is simply not sufficient data for

the State to estimate the percentage of inpatient bed days that are not charity care (that is, [estimated total charges—charity care charges]/estimated total charges), the statute directs that such figure is deemed to equal 1.

Unlike Medicaid EPs, who must waive rights to duplicative Medicare incentive payments, hospitals may receive incentive payments from both Medicare and Medicaid, contingent on successful demonstration of meaningful use and other requirements under both programs.

The last year that a hospital may begin receiving Medicaid incentive payments is FY 2016. States must make payments over a minimum of 3 years and a maximum of 6 years. Additionally, in any given payment year, no annual Medicaid incentive payment to a hospital may exceed 50 percent of the hospital's aggregate incentive payment. Likewise, over a 2-year period, no Medicaid payment to a hospital may exceed 90 percent of the aggregate incentive.

Table 19 demonstrates several scenarios for Medicaid hospitals. However, there are other scenarios not included here. For example, this table assumes that a hospital would participate on a consecutive annual basis until the incentive is exhausted. The purpose of Table 19 is to illustrate the general timeline for Medicaid hospital incentives.

TABLE 19: Hospital Incentives

States will monitor compliance of hospitals coming onto the program with different requirements depending on the year. Incentive determination will also be based on Y1 versus subsequent years. This chart is an example, noting that hospitals may collect the incentive over 3-6 years.

	CY	Demonstration of Compliance						
←←Becomes more difficult to establish meaningful use.	2011	Y1	Y1 participants must demonstrate that they engaged in efforts to adopt, implement, or upgrade to certified EHR technology. However, if users already adopted, they may proceed to Y2 requirements in Y1.					
	2012	Y2	Y1	Y1, same as above. Y2 must become a meaningful EHR user. We expect to issue definition of meaningful use on a biannual basis beginning in 2011.				
	2013	Y3	Y2	Y1	Y1, same as above. Y2-3 will be the same.			
	2014	Y4	Y3	Y2	Y1	Y1, same as above. Y2-4, same as above.		
	2015	Y5	Y4	Y3	Y2	Y1	Y1, same as above. Y2-5, same as above.	
	2016	Y6	Y5	Y4	Y3	Y2	Y1	Y1, same as above. Y2-6, same as above.
	2017		Y6	Y5	Y4	Y3	Y2	
	2018			Y6	Y5	Y4	Y3	
	2019				Y6	Y5	Y4	
	2020					Y6	Y5	
	2021						Y6	

Comment: Many commenters recommended that CMS instruct States to provide hospitals the maximum incentive payments possible in their first two payment years. Commenters provided many examples of how CMS should instruct States to make payments. For instance, commenters suggested that CMS require States to pay 50 percent of hospitals' aggregate incentive payment in the first year and another 40 percent in the second year—as a limited source of capital for adoption, implementation, and upgrades. Many commenters stated that it is critical that EHR incentive payments be made in a timely manner and not delayed or affected by State budgetary problems or changes.

Response: After consideration of the public comments received, we are finalizing these provisions as originally proposed, with one clarification to ensure the statutory requirement that eligible hospitals, after 2016, may not receive an incentive payment, unless a payment was received in the prior year. The statute is imposing maximums on what the State is authorized to pay eligible hospitals. At section 1903(t)(5)(A) the statute requires that a State can make no more than 50 percent of the hospital's aggregate incentive payment in any one year. Likewise, over a 2-year period, the State cannot pay more than 90 percent of the aggregate incentive. Finally, under 1903(t)(5)(D) no more than six years of payment may be made, and payment may not be paid

for any year beginning after 2016, unless the hospital was provided an incentive payment for the preceding year. However, these are limits on State payments, not required minimums. We believe that States should work with their provider communities to determine the best timeframes for implementing their EHR programs and making payments to providers.

Comment: Some commenters indicated that incentive payments should not be included in any calculation of total Medicaid payments for the purpose of determining Medicaid shortfalls, disproportionate share payments, upper payment limits, or any general Medicaid program service.

Response: According to the statute, Medicaid HIT incentive payments are made to encourage the adoption and use of certified EHR technology defined by the statute, as well as support services including maintenance and training that is for, or is necessary for the adoption and operation of, such technology. Payments to providers under this rule are not being made for the provision of services or the cost of the provision of services to Medicaid beneficiaries or the uninsured. Therefore, we are clarifying that EHR incentive payments made to providers in accordance with the statute and final regulation are not subject to the same limits as payments for items and services provided to Medicaid beneficiaries and the uninsured including Medicaid upper payment limits and disproportionate share hospital limits. This comment is also addressed in the Medicare section at II.B.4.b.

Comment: One commenter noted a technical error in the proposed rule at 495.310 (g) (2) Medicaid Share. The commenter questioned whether (2)(iii) meant to qualify (2)(ii) or (2)(i), noting that the latter would result in dual eligibles being removed from Medicaid days (the numerator) and would not conform to the Act which would require that they be removed from the denominator.

Response: We agree that the regulation includes a technical error, and we read the statute as requiring that dually eligible individuals be excluded from the denominator. Section 1903(t)(5)(C) states that the Medicaid share should be calculated using a numerator that does not include individuals "described in section 1886(n)(2)(D)(i)." Individuals described in that section are individuals for whom payment may be made under Medicare Part A as well as individuals enrolled with a Medicare Advantage Organization under Part C. Thus, dually eligible individuals are excluded from the numerator in determining the Medicaid share.

We are therefore revising section 495.310(g)(2)(iii) to ensure that it refers to clause (i), rather than clause (ii), of § 495.310(g)(2).

Comment: One commenter highlighted a technical error in the proposed rule at § 495.310(g)(1)(i)(B) when he requested clarification for that section which reads: "The discharge related amount for a 12-month period selected by the State but with the Federal fiscal year before the hospital's fiscal year that serves as the payment year." He interpreted the language to mean that if the payment year begins in 2011, the Federal fiscal year would be 2010; and the discharge related amount would be for 2009.

Response: Section 495.310(g)(1)(i)(B) is improperly worded in the proposed rule and should read, "The discharge related amount for a 12-month period selected by the State, but ending in the Federal fiscal year before the hospital's fiscal year that serves as the first payment year." For example: FY 2011 begins on October 1, 2010 and ends on September 30, 2011. For an eligible hospital with a cost reporting period running from July 1, 2010 through June 30, 2011, the State would employ the relevant data from the hospital's cost reporting period ending June 30, 2010 in order to determine the EHR incentive payment amount for the hospital.

We are revising this language in the final rule at section 495.310(g)(1)(i)(B) to be clear.

Comment: Some commenters indicated that CMS should specify an alternative source of charity care data that States may use so that Medicare and Medicaid incentive payments can be determined appropriately. Others commented that while CMS has proposed the Medicare cost report, Medicaid cost report data, MMIS data, hospital financial statements, and accounting records to determine Medicaid EHR incentives, there is no absence of State-level usable data to implement this definition.

Response: We agree that there are a number of data sources available at the State and hospital levels that would allow States to accurately capture charity care data for the purposes of calculating hospital EHR amounts. However, we have no vehicle for identifying which of these tools exist in individual States or across the country. Medicare cost reports, Medicaid cost report data, MMIS data, hospital financial statements, and accounting records are all items that we feel confident are accessible to all States and providers. Additionally, we believe that States and their provider communities are better versed at determining the tools that will be most beneficial for their individual programs. As such, we included the standard items listed as auditable data sources, but did not prohibit the use of other appropriate auditable data sources. States must describe their auditable data sources in their SMHP and submit to CMS for review and approval.

After consideration of this comment, we are making no further additions to this section of the final rule.

Comment: One commenter asked whether the criteria for determining Medicaid eligible days and Medicaid managed care days in the Medicaid share portion of the hospital incentive payment calculation is the same criteria for determining Medicare DSH payments.

Response: The criteria for determining Medicaid eligible days and Medicaid managed care days for Medicare DSH and Medicaid managed care days for EHR incentive payments are not the same. Medicare DSH includes unpaid days, while the EHR incentive payment calculation requires the inclusion of only paid inpatient-bed days.

After consideration of this comment, we are making no further additions to this section of the final rule.

Comment: One commenter asked for clarification of the term "estimated" Medicaid inpatient bed days.

Response: We are unclear about the commenter's question. Specifically, the statute permits the use of "estimated" days in the Medicaid share portion of the EHR hospital incentive payment calculation. Therefore, we refer the reader to the hospital calculation at section 1903(t)(5) and section 495.310 of this rule.

After consideration of this comment, we are making no further additions to this section of the final rule.

Comment: One commenter requested that for purposes of accurately calculating and auditing the Medicaid Share, CMS should eliminate data provisions at 2080.18 of the State Medicaid Manual.

Response: We disagree. The provisions at 2080.18 of the State Medicaid Manual do not adversely impact the calculation or auditing of the Medicaid Share.

We have not made any changes to the regulation related to this comment.

Comment: On commenter requested that we include as an auditable data sources, data acquired through authorized trading partners, such as clearing houses, eligibility systems maintained by CMS, state Medicaid programs, and/or their agents.

Response: We agree that there are a number of data sources available that would allow States to accurately data for the purposes of calculating the Medicaid Share. However, we have no vehicle for identifying which of these tools exist in individual States or across the country. Medicare cost reports, Medicaid cost report data, MMIS data, hospital financial statements, and accounting records are all items that we feel confident are accessible to all States and providers. Additionally, we believe that States and their provider communities are better versed at determining the tools that will be most beneficial for their individual programs. As such, we included the standard items listed as auditable data sources, but did not prohibit the use of other appropriate auditable data sources.

After consideration of this comment, we are making no further additions to this section of the final rule.

Comment: One commenter asked whether the Medicaid payment is based on an annually-calculated Medicaid Share, or is the Medicaid Share established in the base year only and to be applied to the duration of payments.

Response: For purposes of calculating the Medicaid hospital incentive, the Medicaid Share is established in the base year.

After consideration of this comment, we are making no further additions to this section of the final rule.

c. Alternative and Optional Early State Implementation to Make Incentive Payments for Adopting, Implementing, or Upgrading Certified EHR Technology

Unlike Medicare, Medicaid has no statutory implementation date for making EHR incentive payments. In our proposed rule we discussed the fact that some States might be prepared to implement their programs and make EHR incentive payments to Medicaid providers in 2010 for adopting, implementing, or upgrading certified EHR technology. We proposed to allow States to initiate implementation of these payments to Medicaid EPs and hospitals after the effective date of the final rule if they could successfully demonstrate to CMS that they are ready to make timely and accurate payments through the SMHP. States would include an additional attestation for providers assuring that they are not accepting payment in any other State.

We also proposed that to be approved for early implementation, a State would be required to have an electronic system for provider registration capable of collecting the relevant information (this information is identified in section II.A.5.c of this final rule, where we describe the data collection requirements).

Participating States would be responsible for transmitting the required data to CMS so that CMS could ensure that no duplicate payments were made to providers. We proposed to use the single provider election repository described in section II.A.5.c. of this final rule to assure no duplicative payments were made between States.

We did not propose that States would be able to make early payments to meaningful users. Rather, our proposal was intended to offer Medicaid providers an early opportunity for capital so that they would be more likely to have the certified EHR technology required to demonstrate meaningful use in successive periods. We stated that since hospitals may qualify under both programs, we hoped that they would use the early capital to qualify as meaningful users under the Medicare program in the first year.

Comment: We received comments suggesting that our proposal on early State implementation creates unreasonable pressure on States, particularly given the status and timeline of the ONC rule on certification criteria.

Response: We agree with commenters. We proposed this option in order for States with very mature programs to proceed with early incentive payments for adoption, implementation, and upgrading certified EHR technology. However, in considering the complexity associated with States establishing an electronic registration system (which would only be temporary), as well as the fact that very few providers (if any) will have certified EHR technology early enough for this option, we believe that this may not be an efficient, cost-effective option for many States.

Consequently, as a result of these comments, we are removing this option. States will not be permitted to make payments until January 2011. Additionally, we wish to reiterate that States must have a SMHP approved by CMS before making any payments to EPs and eligible hospitals.

d. Process for Making and Receiving Medicaid Incentive Payments

The process for making payments involves coordination between Medicare and State Medicaid agencies to avoid duplication of payments, prevent fraud and abuse, and create program efficiencies to encourage adoption. While we have responsibility regarding payments to Medicare EPs and eligible hospitals, State Medicaid agencies (or their contractors) are fully responsible for administering and disbursing the incentive payments to Medicaid eligible providers.

We proposed to require that EPs make a selection between receiving incentive payments through either the Medicare or Medicaid EHR incentive programs. Medicaid EPs who practice in multiple States would be required to choose only one State from which to receive Medicaid incentive payments in each payment year. (We note that readers should also refer to section section II.A of this final rule for additional information regarding the EHR reporting period and the single provider election repository).

As we noted in the proposed rule, the statute anticipates coordination between the Medicare and Medicaid EHR incentive programs to ensure no duplicate payments are made to EPs (see 1903(t) and 1848(o)(1)(D)(iii). Additionally, section 1848(o)(1)(B) of the Act requires that Medicare incentive payments for eligible professionals begin no earlier than 2011. While the Medicaid provisions have no statutory start date, before States may begin implementing the Medicaid EHR incentives, CMS, and ONC need to provide further direction to States in the form of rulemaking and other policy guidance. To that end, Medicaid will not begin to provide 100 percent FFP for incentive payments any earlier than January 1, 2011. This also gives CMS, ONC, and States an opportunity to coordinate between Medicare and Medicaid, which will simplify administrative complexity in the EHR incentive program and facilitate provider adoption.

Under this final rule Medicaid EPs, as discussed in section II.D.5 and II.A.5.c, will enroll in the program through the single provider election repository. Once an EP selects the Medicaid EHR incentive program, States must have a system for reporting and tracking necessary information to qualify an EP for an incentive payment. In addition, as detailed in § 495.316 States are required to submit to CMS data on the number, type and practice location(s) of providers who qualified for an incentive payment on the basis of having adopted, implemented, or upgraded certified EHR technology or who qualified for an incentive payment on the basis of having meaningfully used such technology as well as aggregate de-identified data on meaningful use. States' systems and processes must receive prior approval, concurrent with the requirements described in section II.D.8 of this final rule for review and approval of the SMHP.

The specific timeframes for EPs and eligible hospitals to report and submit

the required information in order to demonstrate they have adopted, implemented, or upgraded certified EHR technology, as well as meaningful use of such EHR technology are discussed in section II.A.1.e. of this final rule. As discussed in that section, for the first payment year based on meaningful use, the reporting period for eligible hospitals and EPs will be a continuous 90-day period that both starts and ends within the payment year. As long as the period spans the 90-day continuous period and ends within the payment year (fiscal year for hospitals, calendar year for EPs), the reporting period can begin at any time during such payment year. States also are expected to process payments on a rolling basis. We will issue further guidance regarding the timing expectations needed for State systems to coordinate with CMS and make timely payments

Comment: Several commenters were concerned that Medicaid EPs and eligible hospitals that qualify for incentive payments in their first year by adopting, implementing or upgrading certified EHR technology are not afforded the same flexibility as Medicare EPs and eligible hospitals in their second payment year. The commenters wrote that they would be required to demonstrate meaningful use for the full year, rather than 90 days in their second payment year, (even though it will be their first year demonstrating meaningful use). The commenters recommended that Medicaid EPs and eligible hospitals be subject to a 90-day reporting period in their second payment year when it is the first year they are demonstrating meaningful use.

Response: We agree with the commenters and as discussed in section II.A., we clarify that there is no EHR reporting period for adopting, implementing, or upgrading certified EHR technology for Medicaid provider's first payment year. In order to offer parity with Medicare providers who must achieve meaningful use in the first year over a 90-day period and over 12 months in subsequent years, the same policy will apply to Medicaid providers. In other words, Medicaid providers in their second participation year (or in their first payment year if they are qualifying based on meaningful use) shall demonstrate meaningful use over a 90-day reporting period and over 12-months for their third and subsequent years.

e. Avoiding Duplicate Payment

In our proposed rule, we discussed the statutory requirement at section 1903(t)(7) of the Act that the Medicare and Medicaid programs coordinate payments to avoid duplication, and that CMS and the States coordinate payments through a data matching process, utilizing NPIs to the extent practicable. We also discussed section 1903(t)(2) of the Act, which states that Medicaid EPs must waive rights to Medicare incentive payments under sections 1848(o) and 1853(l) of the Act; hospitals, however, may qualify for incentives under both programs. We also proposed requirements under the review and approval of SMHPs in part 495 subpart D for States to verify that providers meet these requirements.

In section II.A of this final rule, we discuss the final requirements we are adopting in order to avoid duplicate payments in the Medicare and Medicaid incentive programs. We also respond to comments in that section (*see* section II.A.5.c. of this final rule). As discussed in that section of the final rule, to ensure against duplicate incentive payments, we believe three conditions are required: (1) Knowing which EHR incentive program a provider has selected, (2) uniquely identifying each provider participating in each incentive program; and (3) ensuring that each State has access to the information on which EPs or hospitals intend to receive incentive payments from another State, or from the Medicare program.

To achieve all three of these conditions, we will collect this data in a single provider election repository. Next, in administering each State Medicaid EHR incentive program, States will cross-check for potential duplicative payments through the data available to them through the single provider election repository, which is based on the NPIs. We believe that this coordinates with our requirements that a State must have an approved SMHP that will include a mechanism for cross-checking this information prior to payment.

f. Flexibility for EPs To Alternate Between Medicare and Medicaid EHR Incentive Programs One Time

We refer readers to section II.A.5.b of this final rule, which discusses rules that would allow Medicare and Medicaid EPs to make one EHR incentive program election change prior to the 2015 payment year, and not to permit any switching after the 2014 payment year. Under such a proposal, even if an EP initially received incentive payments under the Medicare program, such an EP could still switch to the Medicaid program one time prior to 2015 (assuming the professional meets all eligibility criteria for the Medicaid incentives program). Similarly, an EP who initially selected the Medicaid EHR incentive program could switch to the Medicare program one time prior to 2015. (In other words, the last payment year an EP could switch would be the 2014 payment year.)

Comments received on these policies are addressed in section II.A.5.b. of this final rule.

g. One State Selection

In the proposed rule, we proposed that EPs and hospitals with multi-State Medicaid practice locations annually pick only one State from which to receive incentive payments. In other words, a provider would not be able to receive incentive payments from more than one State in the same year. Medicaid EPs and hospitals could annually change the State they select when they re-attest to program requirements.

We considered the possible impact of this proposed approach with respect to patient volume calculations on Medicaid EPs and hospitals in border State areas, stating that because the Medicaid incentive payment for EPs will remain the same—regardless of whether they receive payment from one State or from multiple States—we did not think the administrative complexity associated with dividing and administering payments between or among more than one State could be justified. We recommended, however, that States consider border State providers when developing their policies on patient volume and the attestation methodology. We afforded additional flexibility in the patient volume at proposed § 495.306 to account for unique circumstances and data collection.

Comment: Providers inquired whether it is permissible for an EP who practices in more than one State to aggregate patient encounters in order to achieve the 30 percent Medicaid patient volume criteria.

Response: First, it is not clear that aggregating patient volume across States will be an issue once EPs actually begin tallying up patient volume. Patient volume is calculated as a percentage, and not an absolute number. Thus, it does not appear that, but for aggregating patient volume across multiple States, an EP would not be able to qualify for incentive payments in any State. For example, if an EP has 10 percent patient volume in one State (10 of 100 encounters are Medicaid) and 20 percent patient volume in a second State (20 of 100 encounters are Medicaid), this does not add up to 30 percent patient volume (but, rather, results in a 15 percent patient volume

as a result of dividing 30 by 200). To restate, we do not believe that an EP will need to sum patient encounters across multiple States in order to reach the 30 percent patient volume—as in order to reach this patient volume threshold, the EP would likely meet the 30 percent in at least one State. Indeed, it appears that the only benefit of aggregating patient volume across States would be to permit an EP who has more than a 30 percent patient volume in one State to receive incentive payments from another State in which s/he does not meet the 30 percent threshold.

Nevertheless, we recommend that States consider the circumstances of border State providers when developing their policies and attestation methodologies. To afford States maximum flexibility to develop such policies, we will not be prescriptive about whether a State may allow a Medicaid EP to aggregate his/her patients across practice sites, if the State has a way to verify the patient volume attestation when necessary. States will propose their policies and attestation methodologies to CMS for approval in their State Medicaid HIT plans.

We are making no additional revisions to this section of the rule as a result of this comment.

5. Single Provider Election Repository and State Data Collection

We refer readers to section II.A.5.c of this final rule for a discussion of the single provider election repository and the comments received on this policy. As discussed in that section, the repository will collect a minimum amount of information on all EPs and hospitals to prevent duplicative payments and coordinate technical assistance.

6. Collection of Information Related to the Eligible Professional's National Provider Identifier and the Tax Identification Number

In our proposed rule, we proposed that EPs in multiple group practices or multiple types of practice locations would be required to select one TIN for Medicaid EHR payment disbursement. In other words, such EPs would not be permitted to require a State to divide payments among different practices or practice locations based upon group TINs. We explained that requiring EPs to use only one TIN would reduce administrative complexity, as it would ensure that States are not put in the position of dividing payments in any way an EP requests (such as by patient encounters or amount contributed to EHR technology). We also stated that requiring reimbursement to be made to one TIN would reduce opportunities for fraud or abuse, as States would be able to cross-check EP and TIN combinations more easily to verify EP attestations.

We also stated that although the State would not divide payments among the various TINs of an individual EP, Medicaid EPs could, themselves, decide to divide payment. These EPs could independently distribute funds among their respective group practices or practice locations after the initial disbursement from the State to their designated TIN.

Comment: We received comments suggesting that EPs should be allowed to proportion their payments and give multiple TINs.

Response: For these reasons advanced in the proposed rule, we believe that permitting an EP to divide the incentive payment among multiple TINs would introduce an unnecessary level of administrative complexity into this temporary program. It also could increase the opportunities for fraud and abuse as it would be more administratively cumbersome for States to track multiple payments (to ensure correct payments) and to track and verify multiple eligibility-related EP attestations. Once a payment is disbursed from the State, nothing precludes the EP from further disbursing the incentive payment, subject to the applicable fraud, waste, and abuse laws, regulations, and rules.

After consideration of the public comments received, we are finalizing these provisions as proposed.

7. Activities Required To Receive Incentive Payments

a. General Overview

As we discussed in our proposed rule, to qualify to receive a first year Medicaid incentive payment, section 1903(t)(6)(C)(i) of the Act indicates that EPs and eligible hospitals must demonstrate that they are "engaged in efforts to adopt, implement, or upgrade certified EHR technology." For providers who meet this standard in their first year of participation in the Medicaid incentive program, in subsequent years of participation, they must then demonstrate "meaningful use of certified EHR technology through a means that is approved by the State and acceptable to the Secretary," and that may be based upon the methods employed under the Medicare incentive payments to physicians and hospitals, per sections 1848(o) or 1886(n) of the Act.

b. Definitions Related to Certified EHR Technology and Adopting, Implementing or Upgrading Such Technology

(1) Certified EHR Technology

As noted previously, in order to receive a Medicaid incentive payment the EHR technology must be "certified." Section 1903(t)(3) of the Act defines "certified EHR technology" as "a qualified electronic health record (as defined in section 3000(13) of the Public Health Service Act) that is certified pursuant to section 3001(c)(5) of such Act as meeting standards adopted under section 3004 of such Act that are applicable to the type of record involved (as determined by the Secretary), such as an ambulatory electronic health record for office-based physicians or an inpatient hospital electronic health record for hospitals)." In section II.A of this final rule, for both Medicare and Medicaid, we discussed incorporating ONC's definition of certified EHR technology.

(2) Adopting, Implementing or Upgrading

Unlike the Medicare incentive programs, the Medicaid program allows eligible providers to receive an incentive payment even before they have begun to meaningfully use certified EHR technology. These providers may receive a first year of payment if they are engaged in efforts to "adopt, implement, or upgrade" certified EHR technology. In proposed § 495.302, we define adopting, implementing or upgrading certified EHR technology as the process by which providers have installed and commenced utilization of certified EHR technology capable of meeting meaningful use requirements; or expanded the available functionality and commenced utilization of certified EHR technology capable of meeting meaningful use requirements at the practice site, including staffing, maintenance, and training.

For the purposes of demonstrating that providers adopted, implemented, or upgraded certified EHR technology, we proposed that Medicaid EPs and hospitals would have to attest to having adopted, (that is, acquired and installed) or commenced utilization of (that is, implemented) certified EHR technology; or expanded (that is, upgraded) the available functionality of certified EHR technology and commenced utilization at their practice site. We proposed that States would be responsible for ensuring that processes are in place to verify that providers have actually adopted, implemented or upgraded certified EHR technology, patient volume, as well as

other requirements in this section, including verifying that attestations are consistent with methodologies to combat fraud and abuse (see proposed § 495.366 through 370, Financial Oversight, Program Integrity, and Provider Appeals). We proposed that the State's SMHP would detail these processes.

The CMS Medicaid Transformation Grants demonstrated the many challenges that exist to adopting EHR technology. EHR system availability is not the same as EHR system utilization. It is for that reason that we proposed to include staff training and efforts to redesign provider workflow under the definition of implementing certified EHR technology. We explained that success is not simply defined by the acquisition and installation of new or upgraded certified EHR technology, but more importantly by providers demonstrating progress towards the integration of EHRs into their routine health care practices to improve patient safety, care, and outcomes.

In establishing criteria for the "adoption" portion of the "adopt, implement, or upgrade" requirement, we proposed that there be evidence that a provider demonstrated actual installation prior to the incentive, rather than "efforts" to install. We stated that this evidence would serve to differentiate between activities that may not result in installation (for example, researching EHRs or interviewing EHR vendors) and actual purchase/acquisition or installation. As Medicaid incentive payments are intended to stimulate meaningful use of EHR technology, we stated our belief that the payments need to result in tangible adoption, implementation, or upgrading of certified EHR technology. We stated that States would be responsible for verifying this evidence of EHR adoption.

In establishing criteria for the "implementation" portion of "adopt, implement or upgrade" requirement, we proposed that "implementation" mean that the provider has installed certified EHR technology and has started using the certified EHR technology in his or her clinical practice. Implementation activities would include staff training in the certified EHR technology, the data entry of their patients' demographic and administrative data into the EHR, or establishing data exchange agreements and relationships between the provider's certified EHR technology and other providers, such as laboratories, pharmacies, or HIEs.

In establishing the criteria for the "upgrade" portion of "adopt, implement or upgrade" requirement, we proposed "upgrade" to mean the expansion of the functionality of the certified EHR technology, such as the addition of clinical decision support, e-prescribing functionality, CPOE or other enhancements that facilitate the meaningful use of certified EHR technology. We proposed that States describe in their SMHPs the process that would be in place for ensuring that providers have actually adopted, upgraded or implemented certified EHR technology. We encourage States to consider the submission of a vendor contract from providers to ensure the existence of EHR technology.

Comment: Several commenters recommended that CMS clarify if "upgrade" does or does not apply to an already certified EHR. They recommended that CMS confirm that an upgrade is intended to enable a provider to expand existing functionality of an EHR so that it meets the new certification criteria.

Response: To clarify this question, an example of upgrading that would qualify for the EHR incentive payment would be upgrading from an existing EHR to a newer version that is certified per the EHR certification criteria promulgated by ONC related to meaningful use. Upgrading may also mean expanding the functionality of an EHR in order to render it certifiable per the ONC EHR certification criteria.

We are making no additional revisions to this section of the final rule as a result of this comment.

Comment: Commenters wrote that given that adopt/implement/upgrade (AIU) involves significant practice workflow redesign and that the States' overarching goal is to increase the level of provider participation, the commenters recommended that CMS require only AIU for participation Year 1 and Year 2. They further recommended that CMS allow AIU compliance to be further defined as the provider developing, submitting, and following a customized plan for the necessary workflow changes with timelines (whose development can be assisted by the Regional Extension Centers); the provider would have to meet their timelines for each year in Stage 1 to qualify for the incentive payment; and the AIU plan timelines would have to be structured so submission of HIT and clinical quality measures would begin in Stage 2.

Response: The statute at section 1903(t)(6)(C) permits Medicaid providers to receive the EHR incentives for adopting, implementing or upgrading to certified EHR technology in their first participation year. A provider's first participation year may be any year between 2011 through 2016. In their State Medicaid HIT Plans, States will propose to CMS how they will audit and oversee Medicaid providers' adoption, implementation or upgrading to certified EHR technology. States should propose further details to CMS about how they will verify that providers have met this requirement.

After consideration of the comments received, we do not believe that just the development and submission of an implementation plan for EHR adoption is a significant enough commitment to warrant the AIU incentive payment. There is nothing binding, nor is there any financial contribution towards such a plan.

We are making no additional revisions to this section of the final rule as a result of this comment.

Comment: Many commenters suggested that they believe the goal of this incentive is to help defray some of the costs of adopting, implementing, and upgrading to certified EHR technology. As such, the commenters believe "proof" of AIU should not require completion of AIU but demonstrated commitment to AIU. For example, a proof of purchase, a schedule for training and implementation, and periodic reporting from practices on progress on the schedule could suffice. The commenters requested that States have flexibility to define what is sufficient to trigger payment.

Response: States should provide details to CMS on how they will audit and oversee Medicaid providers' adoption, implementation or upgrading to certified EHR technology in their SMHP. States' SMHP should include further details about how they will verify that providers have met this requirement. However, while States may propose how they will determine what AIU activities are sufficient for the EHR incentive payment; CMS must approve their proposals via the SMHP. The definitions included in this final regulation by CMS for adopt, implement or upgrade do imply completion of at least one of the three tasks. A proof of purchase or signed contract would likely be an acceptable indicator of EHR adoption per the States. Implementation is on-going, therefore working actively with Regional Health IT Extension Centers on implementation, completion of specific benchmarks or other activities towards implementation would be acceptable.

We are making no additional revisions to this section of the final rule as a result of this comment.

Comment: A commenter recommended that State Medicaid agencies provide eligible hospitals with

the maximum incentive payments for their first two payment years as a limited source of capital for AIU.

Response: The Medicaid hospital calculation was part of the HITECH statute and not defined by CMS. Eligible Medicaid hospitals can receive their first year's payment for AIU and not meaningful use, but must meet the meaningful use requirement in their second and subsequent participation years.

We are making no additional revisions to this section of the final rule as a result of this comment.

Comment: A commenter recommended that a Medicaid provider be permitted to qualify for their first year Medicaid EHR incentive even if they have not actually installed certified EHR technology but have spent or are committed to spend an amount equal to at least the lesser of $50,000 or 5 percent of the Medicaid EHR incentive amount.

Response: In consideration of the comments, we are clarifying that the final definition of adopt, implement or upgrade is inclusive of providers' acquisition, such as a purchase, of a certified EHR. Providers will be responsible for providing documentation which substantiates AIU as required by the State Medicaid Agency.

We are revising the definition of adopt, implement, and upgrade as a result of these comments, see section 495.302.

c. Other General Terminology

In our proposed rule, we proposed definitions for "EHR reporting period" and "payment period," stating that these definitions relate to the requirements for Medicaid EPs participating in the Medicaid EHR incentive program. As discussed previously, the reporting period is significant for EPs and eligible hospitals because it will define the period during which the provider must demonstrate meaningful use of certified EHR technology. The reporting period also is significant for States, because States will refer to such reporting periods in assuring us that providers are eligible to participate in the Medicaid EHR incentive program. (Requirements relating to the components that must be included in the SMHP were specified in proposed § 495.332). In the proposed rule, we specified that States would need to refer to the providers' reports of the activities that establish their efforts to adopt, implement, or upgrade certified EHR technology. Similarly, once meaningful use of EHR technology is required, States would need to refer to providers' reports on meaningful use, including reporting of clinical quality measures (*see* section II.A. of this final rule for requirements for clinical quality measures), in accordance with the appropriate EHR reporting period. States could not appropriately make incentive payments in the absence of such reporting.

We proposed that States would be required to validate to us that the Medicaid EPs and hospitals meet all of the eligibility criteria to qualify for Medicaid incentive payments, including the applicable patient volume thresholds, hospital-based requirements, and all other requirements. States would develop their own administration, payment and audit processes, and as described in § 495.332, we would require that States include in their SMHPs how they would obtain Medicaid EPs' and hospitals' attestations of eligibility to qualify for the Medicaid incentive payments. We proposed that permissible means for ensuring patient volume and all of the requirements described in this section would include survey, attestation, or the creation of special codes on claims, subject to our prior approval.

Section 1903(t)(6)(C)(ii) of the Act also indicates that in the case of an early adopter, that is, a Medicaid EP or eligible hospital that has already adopted certified EHR technology, such provider would receive payment in the first year and all subsequent years of the incentive program by demonstrating meaningful use.

In our proposed rule, we discussed our expectation that the bar for demonstrating meaningful use of certified EHR technology will rise in years to come. In this final rule, meaningful use and its evolving criteria are discussed in section II.A. In order to receive Medicaid incentive payments, providers will be required to demonstrate (and States will be required to track and validate) meaningful use, as described in section II.A.2. of this final rule. In section II.D.8 of this final rule, we also discuss our policies regarding States' ability to require additional objectives in the demonstration of "meaningful use," or otherwise add to the Federal definition of meaningful use. We also discuss the requirement that States receive prior approval of any such additions.

As we discussed in the proposed rule, we believe that States should carefully consider how to build upon their existing EHR activities and infrastructure without deterring eligible Medicaid providers from participating by compelling them to use a particular system. We encourage States that were awarded Federal HIT/EHR grants, such as the Medicaid Transformation Grants, to the extent practicable, to connect the tools and infrastructure developed under their Federal grant funds with providers' efforts to adopt, implement, and upgrade certified EHR technology and to become meaningful users of certified EHR technology. We will be evaluating States' HIT Planning Advanced Planning Documents (PAPDs) and SMHPs with this objective in mind, as described section II.D.8 of this final rule.

As we discussed in the proposed rule, States' system requirements for monitoring meaningful use must include the capacity to determine the appropriate stage of meaningful use and the appropriate incentive payment amount, depending upon the providers' payment year. In other words, regardless of the calendar year, a provider's first year as a participant in the Medicaid EHR incentive program is when that provider must demonstrate either adoption, implementation, upgrading or meaningful use of certified EHR technology. States' systems must be able to track a provider's year of entry into the Medicaid EHR incentive program to determine the correct eligibility criteria and generate the appropriate Medicaid incentive payments.

Once States are giving providers the Medicaid EHR incentive payments for being meaningful users of EHRs, and in 2012 begin receiving clinical quality measures data from those providers, we proposed that States would be required to share any such reported data with CMS in an aggregated, de-identified manner, on an annual basis. The timetable and format for sharing the clinical quality measurement data would be provided to States in future policy guidance issued by CMS. States' failure to submit these required reports to us could result in discontinued funding or disallowances. See the discussion below regarding the SMHP and the State reporting requirements. We would use the States' reports, including data on meaningful use and clinical quality measures, in order for the Secretary to fulfill her responsibilities to Congress under section 1903(t)(10) of the Act. This provision requires that the Secretary report to Congress on the improvement of health outcomes, clinical quality, or efficiency as a result of implementing this program. For hospitals eligible for both the Medicare and Medicaid EHR incentive programs, we proposed that we would use the meaningful use measures hospitals report to us to make quality data on Medicaid eligible hospitals available to States.

Comment: Commenters requested clarification on the reporting period for

adopting, implementing, and upgrading, and whether this period is similar to the 90-day period for demonstrating meaningful use in the first year.

Response: As discussed earlier, we are clarifying that there is a no reporting period for AIU for the providers' first participation year. However, there is a 90-day reporting period for the first participation year in which Medicaid providers qualify by demonstrating meaningful use. The rationale is that we understand that not all AIU activities require 90 days, such as EHR acquisition. States will determine how they plan to implement this requirement.

As a result of this comment and a similar comment above, we are revising section 495.4 to indicate that there is no EHR reporting period for adopting, implementing, or upgrading in Medicaid providers' first participation year, if they qualify based on AIU, and there is a 90-day reporting period for both the first year that a Medicaid provider demonstrates MU (regardless of whether they demonstrated AIU in their first participation year or are qualifying based on MU in their first participation year).

Comment: Several commenters requested that CMS clarify the process that will assure Medicaid access to Medicare meaningful use data, at a minimum for (1) hospitals who receive both Medicaid and Medicare payments and (2) eligible providers that may switch once between the Medicaid and Medicare incentive programs. Commenters requested that CMS provide States with Medicare quality reporting/data in a timely fashion (for example, within 30 days of receipt of such information). Alternatively, commenters suggested that the providers could be required to report separately to both Medicare and Medicaid.

Response: We are finalizing our policy as proposed. We believe that it would represent an undue burden on hospitals eligible for both EHR incentive payments to report their data to both CMS and the States. We will issue further guidance about how States will be able to access the meaningful use data submitted to CMS by hospitals eligible for both Medicare and Medicaid EHR incentive payments in order for the State to meet its audit and oversight requirements. It is not clear to CMS why a State would require access from CMS to an eligible professional's meaningful use data if they were a Medicare EHR Incentive Program participant in the prior year. States can only base a Medicaid provider's EHR incentive payment, as it pertains to meaningful use, on the current participation year's EHR reporting period.

We are making no additional revisions to our regulations as a result of this comment.

Other than the changes explained above, we are finalizing the remainder of our proposed policies as they were proposed.

d. Quality Measures

We refer readers to section II.A.3 of this final rule-for a discussion of the clinical quality measure reporting required for demonstrating meaningful use of certified EHR technology. As discussed previously, we intend to update our definition of meaningful use biennially, and we expect that our updated, Stage 2 definition would include additional Medicaid clinical quality measures to be reported from EHRs. We intend to work with the quality measurement community to develop these Stage 2 quality measures (*see* section II.B.1.d. of this final rule).

Comment: Several commenters believe that the current clinical measures do not reflect key clinical services and issues for the Medicaid population, including behavioral health, dental, long-term care, and care coordination (particularly across physical and behavioral health care).

The commenters recommend that CMS work with the Medicaid Medical Directors and ONC and consider the development and inclusion of clinical and non-clinical quality measures that are more representative of the Medicaid population. Alternatively they wrote that CMS and ONC should have a "placeholder" to accommodate data and interoperability for these measures. Commenters wrote that the areas with gaps are behavioral health, dental care, long-term care, special needs populations and care coordination, particularly across physical and behavioral health. The commenters recommended that new clinical quality measures be added as "placeholders" for care provided by non-eligible, but critical Medicaid providers, such as Community Mental Health Centers, Home Health, and Renal Dialysis Centers.

Many commenters noted that with regard to pediatric clinical quality measures, they recommend that first-year measures focus on immunizations, diabetes, asthma, autism, and lead screening. They also recommend measures to introduce in 2012 and beyond to include smoking, obesity, disease- or condition-specific measures, and measures aimed at reducing disparities. They further recommended measures to introduce in 2013 and beyond include the development of clinical quality measures on psychology, child abuse, developmental delays, and efficiency measures.

Response: We agree that these measures (listed directly above) have clinical relevance for providers. However we are aligning with the Medicare Stage 1 meaningful use provisions regarding publication and opportunity for public comment on quality measures before they are finalized. We are not including additional meaningful use objectives and measures that were not discussed in the proposed rule.

Comment: Several commenters believed that the quality measures proposed in the interim rule do not match the quality measures that HRSA currently requires FQHCs to report. The commenters would like to work with CMS and HRSA to move forward and harmonize the quality measures by 2013 but requested that until quality measures are harmonized across the federal government system, FQHCs and the EPs who qualify and assign their Medicaid incentive payments to the FQHC should be allowed to report on the current HRSA measures.

Response: Meaningful use applies to each individual EP. Therefore the HRSA quality measures, which are facility-based, not necessarily NQF-endorsed, or reportable from EHRs are not an acceptable alternative for EPs who practice at an FQHC. Furthermore, as explained in section II.A. of this final rule, we are not including in the final rule quality measures that were not included in the proposed rule. To ensure uniformity across both programs, we have adopted this same policy for Medicaid. We believe it is important to offer Medicaid providers and stakeholders the same opportunity for public comment on quality measures.

We agree with the goal of harmonizing quality measure reporting across Federal programs and will engage with stakeholders and experts to address this priority as part of the development of the Stage 2 definition of meaningful use.

We are finalizing these provisions as proposed and we will continue to work to identify, and develop electronic specifications for additional clinical quality measures that address current gaps, such as long-term care, behavioral health, pediatrics and oral health for Stage 2 of meaningful use. In particular, we recognize the lack of endorsed oral health clinical quality measures, with identified and tested electronic specifications. This poses a challenge for dentists, who are eligible professionals for the Medicaid EHR

incentives, to demonstrate meaningful use, other than with the general, profession-neutral measures.

While an eligible professional can report "zero" for the denominator of any measure for which s/he does not have any relevant patients, we will work to include in Stage 2 of meaningful use, clinical quality measures that would provide useful data to CMS and States on oral health care as reported by EHRs.

In addition, in order to minimize provider burden, and to maximize measure reporting efforts and resources, we seek to align the quality measures for the Stage 2 definition of meaningful use with other quality measures development and reporting related to health care reform and other CMS quality measures programs, as appropriate and feasible. Stage 1 of meaningful use is limited to objectives and measures that are already in existence, not those still under development. Measures will be included that have operational relevance to the care provided to Medicaid and CHIP beneficiaries by eligible professionals and hospitals defined in the HITECH Act.

8. Overview of Conditions for States To Receive Federal Financial Participation (FFP) for Incentive Payments and Implementation Funding

Section 1903(a)(3)(F) of the Act provides that States are eligible for 100 percent FFP for direct payment expenditures to certain Medicaid EPs and eligible hospitals to encourage the adoption and use of certified EHR technology. States are also eligible for 90 percent FFP for reasonable administrative expenses, contingent on State compliance with the following requirements: (1) Using the funds to administer Medicaid incentive payments for certified EHR technology, including tracking of meaningful use by Medicaid EPs and eligible hospitals; (2) conducting oversight of the Medicaid EHR incentive program, including routine tracking of meaningful use attestations and reporting mechanisms; and (3) pursuing initiatives to encourage the adoption of certified EHR technology for the promotion of health care quality and the exchange of health care information. (See 1903(t)(9) of the Act.)

This section of the final rule discusses the requirements for States to request FFP from CMS for the Medicaid EHR incentive program. Additionally, this section is closely connected to the requirements outlined in Financial Oversight, Program Integrity and Providers Appeals for purposes of oversight and accountability.

In proposed § 495.302, we defined terms used in the Medicaid subpart of the regulations governing State requests for FFP. Although some of these terms have been defined in other portions of our regulations, for ease of reference, and in order to define the terms in this specific context, we proposed to separately include definitions in part 495.

We proposed to include in our regulations the requirements that in order to qualify to receive FFP for administering the incentive program, States must develop a SMHP, an HIT Planning APD (PAPD), and an HIT Implementation APD (IAPD). These documents lay out the process used by States to implement and oversee the EHR incentive program, and will help States to construct an HIT roadmap to develop the systems necessary to support eligible providers in their adoption and meaningful use of certified EHR technology. The development of a SMHP (*see* also § 495.332) provides States with the opportunity to analyze and plan for how EHR technology, over time, can be used to enhance quality and health care outcomes, while reducing overall health care costs. The uses of EHR technology can be integrated with existing State resources to achieve these goals.

We provided guidance in a State Medicaid Director's (SMD) letter on September 1, 2009, on this process and the State efforts necessary to receive the 90 percent FFP for planning-related expenditures. As stated in that letter, and as further required through this rulemaking, our review process ensures that States are complying with requirements of the HITECH Act, and that they demonstrate to the "satisfaction of the Secretary" that they are using the funds in the manner anticipated by the law. For example, because of our oversight responsibilities, simply proposing activities would not ensure the 90 percent FFP. As explained in the letter, and as further reflected in this rulemaking, we must review and prior approve all elements of the State's SMHP, and APD documents, and work with States to determine the appropriate level and type of FFP.

States are required to submit these advance planning documents in order for us to approve receipt of the 90 percent Federal match. Specifically, prior approval is required for the HIT PAPD (see also § 495.336). The deliverable resulting from the HIT PAPD is the SMHP. The SMHP must be reviewed and approved before it is included in an IAPD (see also § 495.338). The IAPD also must be prior approved. Until approval is granted States cannot draw down funds.

For purposes of the Medicaid EHR incentive program, we believe there are two high-level phases in the process of planning and implementing the incentive program, as well as the promoting the adoption of EHR. Phase I includes initial planning, including an assessment of the State EHR environmental landscape, and development of the SMHP. As explained in our September 1, 2009 letter, the vehicle for informing us of Phase I activities is the HIT PAPD, and indeed, over 40 States have already submitted their PAPDs and have received funding to begin Phase I activities. Phase II then involves further development and full implementation of the SMHP. Consequently, the HIT IAPD is the vehicle for reporting of Phase II activities. As discussed in the SMD letter, and as further reflected in this final rule, States need to receive prior approval of their planning documents. In fact, we have already worked closely with the majority of States in developing their HIT PAPDs, prior to them initiating their EHR planning activities, and we expect this close coordination to continue between the States and CMS.

Also, as proposed, in this final rule we will require States to obtain prior written approval of funding, planning documents, proposed budgets, project schedules, and certain implementation activities that a State may wish to pursue in support of the Medicaid EHR incentive program to encourage the adoption and use of certified EHR technology in line with the 90 percent FFP available to States. To minimize the burden on States, we designed the prior approval conditions, and the prior approval process, to mirror what is presently used in support of acquiring automated data processing equipment and services in conjunction with development and operation of State MMIS (the State's automated mechanized claims processing and information retrieval system approved by CMS).

As proposed, this final rule (at 495.348) will require State Medicaid programs to comply with current procurement standards. Specifically, at 495.348 we have included language that accords with the procurement requirements in 45 CFR part 95 subpart F and incorporates many of the procurement standards previously contained in 42 CFR part 74. Inclusion of these procurement requirements maintains the long-standing procurement standards and policies for State information technology contracts.

Under these standards the State must ensure that when procuring HIT equipment and/or services, there is maximum practical open and free competition, and that any procured materials or services are obtained in a cost-effective manner. The regulations also make clear that the State, as the grantee, is responsible for meeting its contractual responsibilities under any of its procurements, and will not have recourse to the Federal government to settle or satisfy its contractual and administrative issues. Further, States must have written standards of conduct regarding the performance of its employees that are engaged in the award and administration of the HIT equipment/services contracts (including conflict of interest rules contained in 495.348(c)). States must have written procurement procedures that accord with 495.348(e) and a system for administering contracts in accordance with 495.348(f). Procurement contracts must meet the additional requirements contained in 495.348(g) as well as describe the conditions under which the contract may be terminated for default or because of circumstances beyond the control of the contractor (see 495.348(h)). Procurement contracts must include provisions allowing State and Federal access to the materials and staff of the contractor, in accordance with 495.348(i).

As was proposed, our final regulations at 495.346 also will require the State agency to allow the Department access to all records and systems operated by the State in support of the program. Final regulations at 495.352 impose reporting requirements on States to submit to the Department, on a quarterly basis, a progress report documenting specific implementation and oversight activities performed during the quarter. Regulations at 495.354 through 495.360 contain rules for charging equipment, non-discrimination requirements, requirements for cost allocation plans, and requirements for ownership rights in software. Our rules would require termination of FFP in the case of States failing to provide access to information relating to any of the requirements we have included in this subpart. We believe the procurement and other rules discussed above are authorized under section 1902(a)(4) of the Act, as well as under section 1903(t)(9) of the Act requiring a State to conduct adequate oversight of its program, and use its funds to administer the incentive payments. In addition, any reporting and other requirements will assist us in submitting the reports that are required under section 1903(t)(10) of the Act, which requires us to monitor and report on the progress of implementation of the EHR provisions.

As proposed, State Medicaid agencies will be required to attest, as required by section 1903(t)(6)(A)(i) of the Act, that States make Medicaid incentive payments to a Medicaid EP or eligible hospital directly (or to an employer or facility to which such Medicaid EP or eligible hospital has assigned their Medicaid incentive payments) without any deduction or rebate. States must also attest that payments to an entity promoting the adoption of certified EHR technology, as designated by the State, will only be made if participation in such a payment arrangement is voluntary for the Medicaid EP involved, and if such entity does not retain more than 5 percent of such assigned Medicaid incentive payments for costs not related to such technology. (See 495.332 of our final rules). States are required to attest that the entire incentive payment has been forwarded to the eligible Medicaid provider, and that no Medicaid eligible professional or hospital is required to return any portion of the incentive payment to the State Medicaid agency. States must establish a process to ensure that any existing fiscal relationships with eligible professionals or hospitals to disburse the Medicaid incentive payments through Medicaid managed care plans does not result in payments that exceed 105 percent of the capitation rate, in order to comply with the Medicaid managed care incentive payment rules at § 438.6(c)(5)(iii) and a methodology for verifying such information.

Additionally, we are requiring that termination of funding approved under this proposed Part 495 subpart D or disallowance of FFP may result if the State fails to meet the requirements and undertakings of the approved PAPD, SMHP, and IAPD, or fails to provide access to the required information.

Since section 4201 of the HITECH Act amends section 1903(a)(3) of the Act to provide for 90 percent FFP for costs associated with certain administrative activities performed by a State, we have allowed for claiming of such reasonable costs incurred on or after February 18, 2009, prior to publication of the final rule. Specifically, a State that can show that initial planning stages of moving the State in the direction of meaningful use of certified EHR technology through such activities as training efforts, staff support, or contracting with a vendor may potentially receive retroactive FFP back to the date in which these efforts began, with CMS approval, but not before February 18, 2009.

Comment: Several commenters expressed concerns about the timing of planning and implementation and request flexibility in this area. Commenters indicated that there will be a need for ongoing planning while rules and guidelines are being promulgated. Commenters indicated that they envision a phased approach to implementation, and request that CMS permit simultaneous expenditure of both planning and implementation funds.

Response: We proposed specific requirements for States to request FFP from CMS for the Medicaid EHR incentive program modeled on the process States use to request FFP from CMS for Medicaid Management Information Systems technology projects. CMS proposed to utilize information and documentation that will result from the process described in this section to evaluate approaches proposed by States, track and monitor progress of implementation, and perform the statutory program and financial oversight required for this new program.

In establishing the requirements we believe States will have flexibility to request FFP for planning and implementation activities to implement the provisions of the EHR incentive program in a manner that is similar to and consistent with current approaches to receive enhanced FFP for MMIS systems under the Medicaid program. This will enable States to modify or adapt as changes occur during the planning and implementation phases envisioned under this proposed rule. Further, we believe that the information required is consistent with section 1903(t)(9) of the Act that States must demonstrate to the satisfaction of the Secretary that the State is conducting adequate oversight.

We agree with the need for flexibility in planning for the Medicaid incentive program, and the conduct of implementation activities to ensure the program is successful in the long-term. We have added additional clarifying information in the sections regarding the HIT PAPD, HIT IAPD, As-needed HIT PAPD update and as-needed HIT IAPD update, Annual HIT IAPD requirements, and SMHP requirements. These clarifications are consistent with guidance issued in our State Medicaid Director's letter on September 1, 2009, which indicated that CMS anticipates a phased approach to planning and implementation activities.

Finally, for the final rule we are making numerous changes in order to be more specific and provide additional clarity regarding certain terms and

requirements. These revisions are reflected here; however, regulations text is not updated since the concepts of these terms remain the same. Clarifications are as follows:

We have further defined the terms "service oriented architecture (SOA)", or "service component based architecture" to indicate that they are a means of organizing and developing information technology capabilities as collaborating services that interact with each other based on open standards. We are defining this term in the context of health IT projects authorized under the Act to ensure that different systems and programming languages provide a basis for interoperability among and between applications that may reside on different platforms through a communication protocol to achieve health information exchange required under the Act. CMS anticipates that States will describe proposed HIT projects in the context of SOA principles, and intends to evaluate plans for health information exchange, and interoperable health IT based on these commonly used information technology principles.

We have also further defined the term "State self-assessment (SS–A)," a component of MITA, as a process that a State will use to review its Medicaid information technology strategic goals and objectives, measure its current baseline business processes and capabilities against defined MITA business capabilities, and develop targeted future capabilities to transform the Medicaid enterprise to be consistent with the MITA principles of interoperability and exchange of health information. Although we are including a definition of State self assessment in this final rule, we are deleting the requirement that a State provide the MITA SS–A, as we believe the as-is assessment supercedes the need for a separate MITA SS–A. However, we believe it is important to keep a definition of SS–A, because there is an inter-connection between activities accomplished under the Medicaid EHR Incentive Program and States' MMIS enhancements. For example, data exchanges between various State systems that comprise the Medicaid enterprise of the State might also support the State's administration of the EHR Incentive Program.

We are further defining MITA, because we expect that States will describe proposed health IT projects as well as their "as is" landscapes using MITA concepts and principles. We intend to evaluate States' proposed strategies and plans for development of Medicaid health information exchange and interoperable health IT using these MITA principles, as applicable. These strategies and plans must be included in the State Medicaid Health Information Technology Plan (SMHP), a term discussed below. We have previously published a document entitled "MITA Framework 2.0" on the CMS Web site at *http://www.cms.hhs.gov/MedicaidInfoTechArch.* The MITA Framework 2.0 was developed by CMS in collaboration with State Medicaid agencies and information technology vendors to facilitate the adoption of information technology principles and practices that will lead to increased deployment of state-of-the-art technologies and improved management of the Medicaid program. States presently are utilizing MITA and the SS–A for Medicaid IT projects approved by CMS, and application of these principles for activities required under this proposed rule will not add additional burden to State efforts to adopt HIT as envisioned under the Section 1903(a)(3)(F) of the Act.

The MITA principles and tools foster integrated business processes and IT transformation for all States. It achieves this in part by demonstrating that planned enhancements to Medicaid systems, including MMIS, support State and Medicaid strategic goals and how intra-state systems other than the MMIS have been considered in developing the solutions. We believe that as States and providers implement EHRs, it will be necessary and essential to plan technology upgrades that will facilitate health information exchange with Medicaid providers receiving incentive funding.

We are further clarifying that we are defining the Medicaid Management Information System (MMIS) as it relates to specific requirements for Medicaid claims processing and information retrieval contained in current regulations at 42 CFR part 433, subpart C. We proposed a definition of the term MMIS because it is the common term that CMS, State Medicaid agencies, and industry use to refer to the Mechanized Claims Processing and Information Retrieval Systems specified in section 1903(a)(3) of the Social Security Act. MMIS means the system of software and hardware used to process Medicaid claims from providers of medical care and services for the medical care and services furnished to recipients under the medical assistance program and to retrieve and produce service utilization and management information required by the Medicaid single State agency and Federal Government for program administration and audit purposes. The objectives of the MMIS include claims processing and retrieval of utilization and management information necessary for program administration and audit and must coordinate with other mechanized systems and subsystems that perform other functions, such as eligibility determination. The MMIS is also compatible with the claims processing and information retrieval systems used in the administration of the Medicare program.

We believe that States will utilize their MMIS extensively in administering the provisions of this proposed rule, including but not limited to payment and tracking of Medicaid incentive payments, access to data and information necessary to establish the vision for Medicaid health IT, and achieving interoperability and health information exchange envisioned in the Act.

In the proposed regulation at § 495.332 we proposed a definition of the term State Medicaid Health Information Technology Plan (SMHP) as an integral part of planning and implementation of the EHR incentive program. The SMHP is a comprehensive document that describes the State's current and future health IT activities in support of the Medicaid EHR incentive program. We further clarify that we require that the SMHP will be developed by the State Medicaid agency, after consulting with other stakeholders across the State. The SMHP will be reviewed and approved by CMS prior to any activities described in the SMHP being funded and implemented. We anticipate State agencies will engage a wide range of stakeholders within and outside of State and Federal government to develop a vision of how the Medicaid EHR incentive program will operate in concert with the larger health system and statewide efforts. The SMHP is required to participate in the Medicaid incentive program because we believe that States must develop a strategic vision and plan that includes clear targets and measurable outcomes to be consistent with the intent of section 1903(a)(3)(F) of the Act to encourage the adoption and meaningful use of certified EHR technology.

The SMHP is intended to serve as the vision for developing the desired future state for the Medicaid IT environment that furthers the goals of health information exchange and meaningful use envisioned under the Act. The SMHP should be coordinated and integrated with the Statewide plan for health IT developed under section 3013 of the Public Health Service Act, which is developed by the designated statewide entity. To ensure that the SMHP is coordinated and integrated

with the Statewide plan, we will develop criteria and processes for the evaluation of the SMHP consistent with ONC's review of the Statewide plans. The SMHP must contain: (a) A current health IT landscape assessment; (b) a vision of the State's HIT future landscape, and (c) the specific actions necessary to implement the incentive payments program, including a health IT roadmap to achieve those actions. This deliverable will be the "plan" to determine how the incentive payments will be administered; however, it is not the implementation of such plan. The SMHP must include all of the elements listed in 495.332; however, we realize that States may not have all of the answers initially. States will not be permitted to make incentive payments to providers unless they have a comprehensive EHR incentive payment program established. However, if States are not completely clear, for example, about their "to be" world at the time of the submission of their SMHP, States can present the components that are finalized and revise the SMHP to further discuss their "to be" world at a later time. Additionally, as stated previously in this final rule, we have revised the rule to include a requirement that the SMHP must describe the process in place and the methodology for verifying that eligible professionals meet their responsibility for 15 percent of the net average allowable cost for certified EHR technology and that the SMHP include information about how States will validate the patient volume consistent with the menu of options listed in § 495.306.

For this final rule, we are also explaining our understanding that the elements of the SMHP, as listed in § 495.332, may be separated into four categories, as follows:

(1) Assessment and Planning. This category of SMHP elements addresses requirements in the Act relating to increasing the use of health IT, including EHR, ensuring interoperability, and meaningful use of certified EHRs. As proposed, States will perform comprehensive assessments of the current health IT landscape environment in the State, including the inventory of existing health IT in the State, including "as is" and "to be" landscape assessments. Also, as proposed, States will develop a 5-year strategic plan, and a description of how the State Medicaid HIT plan will be planned, designed, developed and implemented, including how it will be implemented, and a description of how intrastate systems, including the MMIS, and other claims systems, have been considered in developing a health IT solution. The SMHP will include a description of data-sharing components of proposed health IT solutions, including security provisions, and description of how the State will support integration of clinical and administrative data.

(2) Ensuring improvements in health outcomes, clinical quality, and efficiency. This category of SMHP elements will address requirements in the Act relating to improving healthcare quality and lowering costs. As proposed, States will include components that describe a process for ensuring improvements in health outcomes, clinical quality, or efficiency resulting from the adoption of certified EHR technology by recipients of Medicaid EHR incentive payments and a methodology for verifying such information. As proposed, we are requiring a description of how the State will address, in the long-term, the needs of underserved and vulnerable populations such as children, individuals with chronic conditions, Title IV–E foster care children, individuals in long-term care settings and the aged, blind, and disabled. We proposed that in order to obtain approval for their SMHP and implementation funding, a State would have to detail how their EHR Incentive Program addressed the concepts of self-direction including budget development and expenditure tracking for persons with disabilities. After additional consideration, CMS decided that these concepts are not directly applicable to electronic health records or meaningful use, per se, and while important, are more associated with other e-Health tools, such as personal health records. Furthermore, the provider types to whom this is most directly relevant, such as home, institutional and community-based providers and facilities, are not eligible for EHR incentives so including planning for this issue was not perceived as rising to the level of a requirement. It is anticipated that Stage 2 of meaningful use will include greater levels of patient engagement, including via personal health records. However, we think it is premature to require that States fully address this issue in their SMHPs order to initiate their EHR Incentive Programs for Stage 1.

As proposed, we will also require a description of the process in place for ensuring that any certified EHR technology used as the basis for incentive payments to Medicaid providers is compatible with State or Federal administrative management systems, including the MMIS, or other automated claims processing system or information retrieval system, and a methodology for verifying such information.

(3) Interoperability and Health Information Exchange. This category of SMHP elements will address requirements in the Act relating to ensuring interoperability and increasing health information exchange. We proposed a series of elements that explain how the State will adopt national data standards for health and data exchange and open standards for technical solutions as they become available. These elements of the SMHP also are included in our final rule.

(4) Administration and Oversight. This category of SMHP elements address the requirements in the Act relating to implementation and financial oversight of the program. For provider eligibility, we proposed that States provide a description of the process they will use for ensuring that each EP and eligible hospital meets provider enrollment eligibility criteria upon enrollment and re-enrollment to the Medicaid EHR payment incentive program, and the process for ensuring patient volume consistent with the criteria in § 495.304 and § 495.306, and for ensuring that each Medicaid EP is not hospital-based and that there is a methodology in place used to verify such information. We are finalizing most of these requirements, as proposed. However, in response to comments suggesting that CMS define the term "encounter" and take a menu approach to patient volume to allow States several options, based on their data sources, CMS has included changes to the SMHP requirements for the patient volume requirement in § 495.302, § 495.306, and § 495.332. These changes are discussed under the patient volume section of this final rule. We note that States that wish to offer an alternative for estimating patient volume would be required to involve key stakeholders in the determination of such alternative. We also proposed, and are finalizing, specific elements in the SMHP relating to monitoring and validation of information, including a method of ensuring all information from provider attestations is captured, stored, and verified, and any information added to the CMS Single Provider Repository is all true and accurate. We also proposed, and are finalizing, that States include a list of the specific actions planned to implement the EHR incentive program, including a description and organizational charts for workgroups within State government and external partners. As proposed, States will need to describe the process they have in place to ensure that no

amounts higher than 100 percent of FFP will be claimed for reimbursement of expenditures for State payments to Medicaid eligible providers for the certified EHR incentive payment program, and a methodology for verifying such information is available and the process to ensure that no amounts higher than 90 percent of FFP will be claimed for CMS-approved administrative expenses in administering the certified EHR technology incentive payment program, including a methodology for verifying such information. As proposed, States will need to include mechanisms for making timely and accurate payments and a requirement that providers attest that they are not receiving a payment in any other State under the Medicaid EHR incentive program. This category also includes elements relating to financial management and auditing necessary to ensure the proper and efficient management and oversight of the program and FFP.

Finally, we proposed that the States may propose in the SMHP alternatives to measuring patient volume or achieving meaningful use. The rules for proposing alternatives are discussed elsewhere in this final rule.

We are further clarifying the definition of Health Information Technology Planning Advance Planning Document (HIT PAPD) (and any necessary update documents) to mean a plan of action that requests FFP and approval to initiate and accomplish planning activities necessary for a State agency to determine the need for and plan the acquisition of HIT equipment and services, and to acquire information necessary to prepare a HIT Implementation Advanced Planning Document (HIT IAPD), described below, or common procurement instruments, such as requests for proposals, or requests for qualifications and quotations, necessary to implement the SMHP. CMS is including a definition of the HIT PAPD so that States may submit proposed resources and planning activities, which are described in further detail in our State Medicaid Director's letter on September 1, 2009, to receive the 90 percent FFP match for initial planning activities related to the Medicaid EHR incentive payment program. In order to qualify for the 90 percent FFP administrative match, section 1903(t)(9) of the Act requires a State to demonstrate, to the satisfaction of the Secretary, compliance with three specific criteria:

(A) The State uses the funds for purposes of administering the incentive payments, including the tracking of meaningful use of certified EHR technology by Medicaid providers;

(B) The State conducts adequate oversight of the incentive program, including routine tracking of meaningful use attestations and reporting mechanisms; and

(C) The State pursues initiatives to encourage adoption of certified EHR technology to promote health care quality and the exchange of health care information under Medicaid, subject to applicable laws and regulations governing such exchange, while ensuring privacy and security of data provided to its data exchange partners.

We are further clarifying the definition of Health Information Technology Implementation Advance Planning Document (HIT IAPD) (and any necessary update documents) to mean a plan of action that requests approval of FFP to acquire necessary resources to implement and administer the activities and objectives of the State's proposed SMHP, once the SMHP is approved by CMS, including the allocation or acquisition of human resources, services and equipment. To qualify to receive FFP for administering the incentive program, States must develop an HIT PAPD, SMHP, and an HIT IAPD. These documents would lay out the process States will use to implement and oversee the EHR incentive program, and would help States to construct and maintain a health IT roadmap to develop the systems necessary to support providers in their adoption and meaningful use of certified EHR technology.

With respect to FFP under the Medicaid incentive program, we are clarifying that the incentive payments to providers are matched at 100 percent FFP as described above, and therefore there is no non-Federal share for these payments. However, there is a non-Federal share necessary for the administration of the payment incentives. That is, CMS is reimbursing States at 90 percent FFP for reasonable expenses related to the administration of the payment incentives. States must fund the 10 percent non-Federal share of Medicaid health information technology (health IT) administrative payments consistent with existing rules and regulations regarding funding of the non-Federal share. We review non-Federal share funding sources to ensure compliance with existing statute and regulations. Consistent with current practice, we will review non-Federal share funding sources on an individual basis using information provided by the State and gathered by CMS staff. Existing rules permit States to provide the non-Federal share of administrative claims through various sources, including appropriations, intergovernmental transfers, certified public expenditures, bona fide donations, and permissible health care related taxes. CMS' regional financial management staff will review funding sources and will review the Medicaid Budget and Expenditure System to ensure that all claims for reimbursement are appropriate. Additionally, States are required to submit SMHPs outlining their process for making payments and ensuring that all claims for reimbursement are appropriate to CMS for review and approval.

At § 495.324 we proposed to review and prior approve all elements of the State's APD documents and SMHP described in this rule to ensure that all of the intended objectives of the program are addressed. We are finalizing this proposal. States are required to submit these APD documents and the SMHP in order for us to approve FFP. Specifically, prior approval is required for the HIT PAPD (see also § 495.336). The deliverable resulting from the HIT PAPD is the SMHP. The SMHP will be reviewed and approved before it is included in an HIT Implementation APD (HIT IAPD) (see also § 495.338). The HIT IAPD also must be prior approved. After a HIT PAPD is approved for planning activities, and these planning activities are complete, we anticipate that in certain cases, States may decide to submit the SMHP and HIT IAPD together in one submission for CMS review and approval. In all cases, until approval is granted, States cannot draw down Federal funds. We envision that the prior approval process described at § 495.324 will permit States to work closely with CMS in developing the HIT PAPD prior to initiating EHR planning activities and prior to submission of the initial HIT PAPD.

We are defining "as needed" and "annual" updates to the HIT PAPD and HIT IAPD at § 495.340 and § 495.342. In consultation with States and other key stakeholders, CMS has determined that planning and implementing the Medicaid EHR incentive payment program will be a complex process that will result in a need for "as needed" and "annual" updates to the original scope of work. Therefore, we proposed that the APD process would allow States to update their APD documents when they anticipate changes in the amount of FFP, duration of the project, or scope of work or activities under the APD. We are finalizing this proposal, as it allows States flexibility to add additional tasks and milestones as the project evolves, as determined since the date the APD was

initially approved or since the most recently updated and approved APD.

We initially proposed that we envision two phases in the process of planning and implementing the incentive program, as well as the promotion of adoption and meaningful use of EHR. We are further clarifying that based on submission of HIT PAPDs in response to guidance provided in our State Medicaid Director's letter of September 1, 2009, initial planning timelines are ranging from 6 months to 18 months to develop the SMHP. CMS envisions that States will begin to administer the EHR incentive program on January 1, 2011, once the SMHP and IAPD are approved. As proposed, we will issue additional written guidance, similar to our earlier SMD letter, concerning timelines for implementation of the EHR incentive program as States develop the SMHP.

We require the HIT IAPD as the vehicle for informing us of Phase II activities. We anticipate that States will also have ongoing planning needs as implementation activities, once approved under the IAPD, are under way. We further envision that the IAPD "annual" or "as needed" updates may also include requests for approval of FFP for other Phase II that are necessary to continue planning and development for the ongoing implementation phases of the program. In section 495.388, we proposed to require that States submit information in the IAPD regarding an estimate of prospective cost allocation (OMB Circular A–87, Cost Principles for State, Local, and Indian Tribal Governments) to the various State and Federal funding sources and the proposed procedures for distributing costs including a detailed payment list file to include NPI, name, and type of provider for which the State will provide incentive payments. For the final rule, we are continuing to require the estimate of prospective cost distribution and the procedures for distributing costs; however, we are eliminating the requirement that States have to submit NPI, name and provider type as part of the estimates for cost distribution since we realize that in continuing to require this information States will not be able to submit approvable IAPDs to CMS because States will not have this information at the time of submittal; hence, States will not be successful in implementing this program.

We wish to further clarify that in proposing termination of funding if the State fails to meet the requirements and undertakings of the approved HIT PAPD, SMHP, and HIT IAPD, or fails to provide access to the required information, this requirement is necessary to ensure the proper and efficient use of FFP and is consistent with present authority under the Act and existing regulations that are promulgated by CMS, including at 45 CFR Part 95, Subpart F.

Comment: One commenter questioned whether the EHR incentive payments will be required to be processed through the Medicaid Management Information System (MMIS).

Response: Payments under the Medicaid EHR incentive program are authorized under Title XIX of the Social Security Act as part of the Medicaid program. We require that States have an automated claims processing and information and retrieval system, known as MMIS to manage health care provider payments for health care services, and provide information for program management, administration, and auditing. As such, we believe that most States will choose to process, monitor, and report Medicaid incentive payments to eligible professionals and hospitals participating in the Medicaid EHR incentive program using the MMIS. States may propose alternative methods to process, monitor, and report Medicaid incentive payments in their SMHP. Any proposed method to process, monitor, and report Medicaid incentive payments, including utilization of the State's MMIS, must be approved by CMS. Through guidance issued in a State Medicaid Directors Letter and via case by case analysis of APDs, CMS will collaborate with States to approve system development and enhancement expenditures under the most appropriate funding source, HITECH or MMIS.

Comment: One commenter provided comments on § 495.348(d), Procurement standards; Competition, and § 495.360(a). The commenter agrees that procurement transactions are conducted to provide, to the maximum extent practicable, open and free competition and recommends that procurement transactions require that bidders bid specifically for the EHR portion of any project (to ensure that the discrete costs are clearly identified), (2) no certified EHR technology may be excluded from bidding, and (3) all projects must be both EHR-neutral and provider-neutral. They further comment that CMS could consider having either a cap or percentage limits on the amount of administrative costs or consulting fees to ensure that the bulk of the award is used for the hard costs of the project: equipment, connectivity, and training.

Response: The requirement in § 495.348(d) is limited to States and other grantees of Federal funds authorized under Title XIX of the Social Security Act and does not apply to procurement standards for vendors bidding on EHR technology for eligible providers. However, CMS will encourage States to include adoption of interoperable solutions that align with the MITA principles that address IT architectural and platform neutrality.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter recommended that CMS reconsider the general rule set forth in § 495.360 that "the State or local government must include a clause in all procurement instruments that provides that the State or local government will have all ownership rights in software or modifications thereof and associated documentation designed, developed or installed with FFP under this Subpart." The commenter states that it is typical for the vendor to own the underlying software, and State or local governments are provided a license to use the software, and this is contrary to the proposed general rule.

Response: We disagree with the recommendation to exclude a clause in all State procurement instruments that provides that the State or local government will have all ownership rights in software developed or modified using Federal funding. This is a long-standing principal for use of FFP associated with the development of information technology solutions that may be licensed for use by other State or Federal government agencies to benefit the Medicaid program, at no additional cost for the license. CMS clarifies that costs of the license agreements for proprietary software may be reimbursable under the provisions of 1903(a)(3)(F)(ii) of the Act that provides for 90 percent FFP for costs associated with certain administrative activities performed by a State. However, costs associated with developing or modifying software may not be funded with Federal funds unless the State has ownership rights to that software. This provision does not apply to eligible providers or hospitals purchasing software for which Federal funding has been provided by States through the Medicaid EHR incentive program. Proposed costs may be submitted for review and consideration for approval by CMS as part of the HIT PAPD and HIT IAPD requirements described in this proposed rule under § 495.336 and § 495.338.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter indicated that the process for State Medicaid plans seems to be lengthy, with no timeframes specified for initial submission from the State to the Department, nor is there a timeline for the approval process from CMS back to the State. There is also no timeline for the implementation of the health IT programs after a State receives approval. The commenter also notes that with the burden for administration on the States, there may not be adequate time to get all of the activities completed to have infrastructure and processes in place to accept data or attestations from the Eligible Providers and Eligible Hospitals.

Response: We provided specific guidance on timelines and process prior to the initial planning period regarding State planning activities and administrative expenses for provider incentive payments in our State Medicaid Director's letter on September 1, 2009. We also indicated in our letter that CMS will work with States to determine when each State is ready to begin making payments. We have provided additional rationale about the process for submitting documents and required content in the final rule. In the near future, CMS will issue more guidance on specific implementation activities and timelines, prior to States submission of their SMHP and IAPD.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter requested that CMS require that States pass through the matching funds to providers.

Response: The regulation at section 495.366 requires that States have a process in place to assure that Medicaid EHR incentive payments are made without reduction or rebate, have been paid directly to an eligible provider or to an employer, a facility, or an eligible third party entity to which the Medicaid eligible provider has assigned payments. This language is consistent with the statutory language at 1903(t)(6). We will require that this process be established in the SMHP.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter requested that CMS clarify that use of certified public expenditures (CPE) or intergovernmental transfers in the context of the Medicaid EHR incentive payments would be inappropriate, since these payments do not have a non-federal share. If CMS does permit use of CPEs in the Medicaid EHR incentive program context, CMS must require that States pass through the matching funds to providers.

Response: We believe the commenter is not clear. As explained above incentive payments to providers are matched at 100 percent; thus, there is no non-Federal share for these payments. However, there is a non-Federal share necessary for the administration of the payment incentives. CMS is reimbursing States at 90 percent for reasonable expenses related to the administration of the payment incentives and States must fund the 10 percent non-Federal share of Medicaid health information technology administrative payments consistent with existing rules and regulations regarding funding of the non-Federal share. Please see our above discussion of this issue for further detail.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter questioned why Medicaid is allowed to determine its own requirements and the impact this may have on other stakeholders.

Response: We are clarifying that we have provided specific guidance for State planning activities that must be addressed in order to qualify to receive FFP for administering the incentive program. We provided guidance in a State Medicaid Director's letter published on September 1, 2009, on this process. CMS intends to require submission of documentation that will enable the agency to evaluate whether the activities for which FFP was, or may be approved for, are being completed according to Federal requirements, including any terms and conditions of FFP approval. States must develop a HIT PAPD, a SMHP, and a HIT IAPD. These documents would describe the processes and resources States will use to implement and oversee the EHR incentive program, and would help States to construct an health IT roadmap to develop the systems necessary to support providers in their adoption and meaningful use of certified EHR technology. The development of a SMHP (*see* also § 495.332) also provides States with the opportunity to analyze and plan for how EHR technology, over time, can be used to enhance quality and health care outcomes and reduce overall health care costs. Our review process ensures that States are complying with requirements in the Act, and that they demonstrate to the "satisfaction of the Secretary" that they are using the funds in the manner anticipated by the law. For example, because CMS is responsible for overseeing States in their administration of the Medicaid program, as well as ensuring the overall financial integrity of the program, States cannot simply propose activities in order to secure the 90 percent FFP. We propose to review and prior approve all elements of the State's SMHP, and APD documents described in this rule to ensure that all of the intended objectives of the program are addressed. One of the key components of the SMHP is stakeholder collaboration and coordination to ensure that an integrated strategy is developed addressing stakeholder needs.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter recommended that all the source materials needed to create the quality measure registry, is submitted to the MITA Information Architecture Review Board (IARB) for approval as a MITA standard and all the source materials be added to the MITA artifact repository. Doing this will prevent duplicative efforts and associated expense both by CMS and the participating States.

Response: We agree with the commenter. We support the concept that States should apply MITA principles to any IT development work performed for the EHR incentive program, where applicable. If a State chooses to integrate a clinical data warehouse into its MMIS system, all recommended steps, and required approvals, for MMIS development, including application of MITA guidelines, should apply. The goal of MITA is not to focus on creating new standards so much as utilizing data standards developed by other national organizations, such as those responsible for implementation of HITECH and also defining information requirements for new business processes. If a State is going to develop its own clinical data repository to store Medicaid providers' submitted clinical quality measures data (one of the MU objectives), then use of the MITA Governance boards would be a recommended approach. States whose SMHPs successfully apply MITA to their EHR incentive program systems are encouraged to store approved artifacts in the Clemson University MITA repository so that other States may benefit: *http://mita.clemson.edu.*

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter, as a large pediatric provider with five physicians and four nurses in a relatively rural area, is concerned that States have not yet sent, or had approved by CMS, the State's Medicaid requirements.

Response: States are in the process of developing their SMHPs. States could not be approved to start offering incentives prior to a final rule becoming effective.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: Some commenters asked for clarification on how managed care entities would be involved in this program besides potentially being used to disburse incentive payments, as mentioned in the proposed rule. Examples included things like monitoring providers in the health plans to ensure compliance. The commenters suggested that any work done by the managed care entity should be reflected in the capitation rate.

Response: Service agreements between States and their managed care contractors are not governed by this regulation, but must be in compliance with 42 CFR part 438. We agree there are many opportunities to leverage the efficiencies of the managed care entities' activities and role with the larger goals and State responsibilities for administering the payments. We suggest that activities like distributing informational materials about the incentive program and health IT to health plan providers and enrollees would fall under most current contracts and would be considered part of the cost of doing business, which may be reflected in the administrative portion of the capitation rate.

If more significant activities are expected, such as monitoring and reporting information on the providers, health plans may exceed the normal costs of doing business and what would be adequately reflected in the administrative portion of the capitation rate. An alternative option would be for the State and managed care organization to have contractual requirements and deliverables separate from the capitation rate, including the administrative component. In the latter scenario, it would be acceptable to develop a contract amendment specifying the terms.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: A commenter asked whether or not a State would need to file a State Plan Amendment that incorporates the SMHP into their State Plan, or if the SMHP can stand alone. The commenter further asked that if the SMHP can stand alone, then would the state need to file a State Plan Amendment that references the SMHP in their plan.

Response: CMS clarifies that the State does not need to file a State Plan Amendment or reference the SMHP in their State Plan. As part of the Advance Planning Document process, the SMHP is a deliverable that is submitted to CMS for review and approval prior to expending funds for the incentive program implementation activities.

We are making no additional revisions to this section of the rule as a result of this comment.

9. Financial Oversight, Program Integrity and Provider Appeals

Pursuant to section 1903(t)(9) of the Act, which requires States to conduct adequate oversight of the incentive program, and in order to ensure that ARRA funds are expended wisely and in a manner that impedes waste, fraud or abuse of Federal taxpayer money, at § 495.366, we proposed requirements for States' financial oversight and monitoring of expenditures. Additionally, we proposed at § 495.368 to provide State requirements for combating fraud and abuse.

Specifically, States would be responsible for estimating the expenditures for the Medicaid EHR incentive program on the State's quarterly budget estimate reports. These reports are used as the basis for Medicaid quarterly grant awards that would be advanced to the State for the Medicaid EHR incentive program. The State submits this Form electronically to CMS via the Medicaid and State CHIP Budget and Expenditure System (MBES/CBES). States must assure that requests for reimbursement of FFP comply with all sections of this new part and that the amounts reported on the Form CMS–64 and its attachments represent actual expenditures for which all supporting documentation, in readily reviewable form, has been compiled and which is available at the time the claim for reimbursement of provider payment incentives and administration funding is filed.

We would assure that State expenditures claimed for Federal matching under the Medicaid program are programmatically reasonable, allowable, and allocable in accordance with existing Federal laws, regulations, and policy guidance. States would be responsible for establishing policies, computer systems, edits to process Medicaid EHR incentive payments; and for conducting analyses of providers' patterns of practice (data-mining) and taking other reasonable steps to ensure that no duplicate or otherwise improper EHR incentive payments have been made. States will be responsible for ensuring that provider information, including but not limited to, attestations, survey, and any information added to CMS' single provider election repository indicates that any falsification of documentation or concealment of material facts may be prosecuted under Federal and State laws. States would be responsible for recovering and returning to CMS FFP for any HIT incentive payments that are discovered to be improper. State Agencies must have information processing systems, which may include an MMIS—the automated mechanized claims processing and information retrieval system, to process Medicaid EHR incentive payments. MMIS systems can also help to manage information for program administration and audit purposes.

States must assure that any requests for reimbursement of the 90 percent Federal match for administration of the program are being requested only because the State has used the funds for purposes related to administering payments to qualified Medicaid providers for certified EHR technology, including for tracking of meaningful use of such technology, is conducting adequate oversight of the program including routine tracking of meaningful use attestations and reporting mechanisms; and is pursuing initiatives to encourage the adoption of certified EHR technology to promote health care quality and the exchange of health care information because of such technology. Any initiatives for health information exchange must be consistent with Federal laws and regulations governing the exchange.

We would monitor State Agency compliance through systems performance reviews, on-site reviews, and audits of the APD process. Additionally, we would monitor provider demonstration of meaningful use.

As a result of the authority extended to the Secretary under section 1902(a)(4) of the Act requiring the effective and efficient administration of the State plan, as well as section 1903(t)(9) of the Act, requiring that a State demonstrate to the satisfaction of the Secretary that it is conducting adequate oversight of the program, we also are requiring States to establish § 495.370, Provider Appeals. This section specifies that Medicaid providers who believe that they have been denied an incentive payment or have received an incorrect payment amount under this part because of incorrect determinations of eligibility, including, but not limited to, measuring patient volume; demonstrating meaningful use of, or the efforts to adopt, implement, or upgrade

to, certified EHR technology; whether the professional is hospital-based; whether the professional is practicing predominantly in an FQHC or RHC; whether the hospital qualifies as an acute care or children's hospital; or whether the provider is already participating in the Medicare incentive program and therefore ineligible duplicate Medicaid incentive program payments can appeal the decision using current Federal processes established at § 447.253(e).

Comment: One individual commented on potential fraud and abuse opportunities if large amounts of medical data can be mined, as a result of electronic health records.

Response: First, it is important to note that as part of demonstrating meaningful use providers will be submitting only aggregated, not individually identifiable data, to States. Second, we wish to clarify that providers will be required to comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) to the extent that they are covered entities. States must provide CMS with details about how their implementation of the EHR incentive program will address Federal and State privacy laws and how all data will be secured in the SMHP.

Additionally, the act of preventing fraud should be paramount in implementing this program. In accordance with Section 1903(t)(9) of the Social Security Act, States must demonstrate to the satisfaction of the Secretary that they are conducting adequate oversight of this program and that they are complying with Federal requirements to: (a) Ensure the qualifications of providers who request Medicaid EHR incentive payments, (b) detect improper payments and (c) refer suspected cases of fraud and abuse to the Medicaid fraud control unit. In conducting required oversight responsibilities, States can receive 90 percent matching funds for allowable expenditures. States are required to assure CMS through the State's Medicaid HIT plan that they have processes in place to prevent against fraud and abuse. CMS will review and approve each State's Medicaid HIT plan.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter noted that use of electronic health records may provide claims adjudication auditors with documentation to verify that items or services provided are reasonable and necessary, supporting an upfront clean claims process and the opportunity to conduct pre- and post-pay audits without the need to request documentation in retrospect. Another commenter wanted an assurance that CMS will perform audits of a random sample of attestation surveys and that any providers that are found to be making false claims would be penalized and listed in a public report posted on CMS' Web site.

Response: We thank the commenter for the comments, but point out that meaningful use currently would not include using EHRs to provide electronic documentation in support of claims adjudication. We do, however, want to address the issue of pre- and post-audits. While one commenter is concerned with the process for adjudicating claims, the other commenter is concerned that there are other areas of this program that will necessitate pre- and post-pay audits. For Medicaid, States are required to provide information to CMS in the State Medicaid HIT plan outlining the processes and methodologies they will use to ensure that payments are being made to the right person, at the right time, for the right reason. Specifically, in year one in order to receive an incentive payment, providers will be attesting to, among other things, whether they are using a certified EHR, demonstrating meaningful use, demonstrating adopting, implementing or upgrading certified EHR technology, etc. States will be required to "look behind" provider attestations. We believe that this will require audits both pre- and post-pay. CMS believes a combination of approaches is in order which should result in accurate payments. CMS wishes to point out that States must provide assurances to CMS that they are conducting adequate oversight in order to receive the 90 percent FFP for administration of the incentive payments. Additionally, it should be noted that this program is consistent with other programs under Title XIX. States must properly administer the program or risk FFP. All costs claimed under the program are subject to review or audit. Furthermore, CMS' approval of the State Medicaid HIT plan does not relieve the State of its responsibility to comply with changes in Federal laws and regulations and to ensure that claims for Federal funding are consistent with all applicable requirements. We should point out that for Medicaid there is no statutory requirement to post individual provider's name and/or incentive payment program information to the CMS Web site.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter is concerned about the circumstances under which Medicaid is required to recoup incentive payments from providers. Specifically, the commenter requests clarification on the scenario in which a provider receives a payment for demonstrating adoption, implementation, or upgrading EHR technology in year one, demonstrating meaningful use in years two and three, but receives no payment in year four because the provider could not demonstrate meaningful use. The commenter is concerned that Medicaid will be responsible for recouping payments made in years one, two, and three.

Response: First, it should be noted that it is possible for a provider to be able to demonstrate meaningful use in one year, but not others. Thus, the failure of the provider to demonstrate meaningful use in year four would not necessarily mean that the provider failed to demonstrate meaningful use in prior years, although it could possibly alert the State to more closely review a specific provider's prior year attestations or demonstrations of meaningful use. For hospitals demonstrating meaningful use in both the Medicare and Medicaid incentive payment programs, CMS will issue further guidance about how States will be able to access the meaningful use data submitted to CMS in order for the State to meet its audit and oversight requirements. States will be required to outline in the SMHP the process for "looking behind" provider attestations and the demonstration of meaningful use including any record retention requirements.

In accordance with section 1903(t)(9) of the Social Security Act and § 495.332(c) and (e) of the regulations as well as § 495.368, States are required to include in their State's Medicaid HIT plan processes for detecting improper payments and for combating fraud and abuse. This would mean that States will be responsible for conducting audits of providers and ensuring that any requests for reimbursement for FFP meet all requirements of this subpart. When States conduct audits and determine that improper payments have been made, States are responsible for recovering and returning to CMS FFP for any incentive payments that are discovered to be improper.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: Another commenter is concerned with a similar issue. That is, the commenter requested that CMS identify and develop "safe harbor"

processes and methods for administering the incentive program that would assure States that if these processes/methods are used, States would not be at risk if the processes/methods are less successful than anticipated. An example would include a process for auditing the adoption, implementation, and upgrading process. If an audit approach was agreed to but ended up being less than effective when applied, the State should not be responsible for re-auditing providers for previous years, nor would it be denied participation in the incentive program and lose the FFP. Another commenter is similarly concerned that this is a new program and they requested that CMS explicitly recognize the States' ability to revise and redirect the program without penalty from CMS.

Response: Our focus is on ensuring that EHR incentive payments are made to the eligible provider, and are for the correct amount in the appropriate payment year (or payment cycle). CMS will ensure that State expenditures claimed for Federal matching under the Medicaid program are programmatically reasonable, allowable, and allocable in accordance with existing Federal laws, regulations, and policy guidance.

States can receive FFP if they are conducting adequate oversight and States must provide their plans for financial oversight and the processes and methodologies they will use to verify provider information to CMS for review and approval as part of its State's Medicaid HIT plan. We believe States may want to consider multiple ways in which to audit their providers; for example, to ensure that a provider is not excluded from the program, the State should review on a prepay basis the Office of the Inspector General's List of Excluded Individuals and Entities to determine if providers are excluded. Additionally, States may wish to consider attestation in year one for demonstrating adopting, implementing, or upgrading or meaningfully using certified EHR technology. States will have to "look behind" these attestations and we assume this will be done on a post-pay basis. One size does not fit all and we believe several audit options should be used by States to ensure "adequate oversight." However, if it is determined that the State's audit methodologies are proving to be less than effective we will require that the State update its State Medicaid HIT plan and present more effective audit strategies that will work to accomplish conducting adequate oversight of the program. States must ensure due diligence in conducting adequate oversight and all requirements of this subpart must be met or FFP could be at risk.

We are making no additional revisions to this section of the rule as a result of this comment.

Comment: One commenter requested information regarding the appeals process.

Response: For Medicaid, CMS has specified the appeals process for a Medicaid provider receiving electronic health record incentive payments in § 495.370. Specifically, the State must have a process in place consistent with the requirements established at § 447.253(e) to allow for providers to appeal incentive payments, incentive payment amounts, provider eligibility determinations, and the demonstration of adopting, implementing or upgrading and meaningful use of certified EHR technology. CMS is requiring that the State Medicaid HIT plan describe the process in place for provider appeals. We believe the States, not the Federal government, are in the best position to determine the administrative process that would best meet their needs and we believe States are in a position to design an effective appeal procedure; thus, we are providing for a great deal of State flexibility. Within the parameters of the regulation, States are free to establish reasonable criteria for appeals, to limit the issues on appeal that may be appropriate, or to adopt other procedures to prevent frivolous appeals. However, State appeal processes should be consistent with the requirement in § 447.253(e) for prompt administrative review. (States define what would constitute a prompt review, and we have not specified a time period for conducting or concluding a provider appeal.) This requirement is in keeping with providing States flexibility while retaining for providers an opportunity to avail themselves of an exception process when they believe an exception is warranted. Additionally, § 447.253(e) provides that the Medicaid agency must allow providers an opportunity to submit additional evidence. Our regulations at § 495.370 also require that the appeals processes established by the States comply with the State's own administrative procedure laws and that the State provide any additional appeal rights that would otherwise be available under the procedures established by the State.

We are making no additional revisions to this section of the rule as a result of this comment.

III. Information Collection Requirements

Under the Paperwork Reduction Act of 1995, CMS is required to provide 60-day notice in the **Federal Register** and solicit public comment before a collection of information requirement is submitted to the Office of Management and Budget (OMB) for review and approval. In order to fairly evaluate whether an information collection should be approved by OMB, section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 requires that CMS solicit comment on the following issues:

- The need for the information collection and its usefulness in carrying out the proper functions of our agency.
- The accuracy of our estimate of the information collection burden.
- The quality, utility, and clarity of the information to be collected.
- Recommendations to minimize the information collection burden on the affected public, including automated collection techniques.

The following is a discussion of the requirements we believe are subject to PRA and collection of information requirements as a result of this final rule. This analysis finalizes our projections which were proposed in the January 13, 2010 **Federal Register** (75 FR 1844 through 2011). The projected numbers of EPs and eligible hospitals, MA organizations, MA EPs and MA-affiliated hospitals are based on the numbers used in the impact analysis assumptions as well as in Table 32 in section IV of this final rule.

A. ICRs Regarding Demonstration of Meaningful Use Criteria (§ 495.8)

Section 495.8(a)(1) of the proposed rule contained requirements for EPs, in CY 2011, to attest, through a secure mechanism, to meeting meaningful use criteria. As described in the proposed rule (75 FR 1949), we divided meaningful use objectives/measures into Sets A and B. We estimated that the total burden for an EP to attest to § 495.8(a)(1)(i) and (ii) for Set A meaningful use objectives/measures and ambulatory quality measures would be one hour. For all 442,600 non-hospital-based Medicare and Medicaid EPs (323,500 Medicare EPs, 80,900 dual Medicare/Medicaid EPs, and 38,200 Medicaid-eligible-only EPs), the burden therefore equaled 442,600 hours. We estimated that the associated cost burden was $79.33 for an EP to attest to § 495.8(a)(1)(i) and (ii) for Set A meaningful use objectives/measures and ambulatory quality measures, and the total associated annual cost burden for all EPs to attest was $35,111,458. We invited comments on the estimated percentages and the numbers of (registered) EPs that will attest to the above including Set A meaningful use

objectives/measures in CY 2011, but did not receive any on this issue.

In the proposed rule, we also estimated that it would take 8 hours for an EP to attest to meeting the Set B meaningful use objectives/measures. We estimated that the total annual burden for all 442,600 non-hospital-based EPs to attest to Set B meaningful use objectives and measures was 3,540,800 hours. We estimated the associated cost burden for an EP to attest was $634.64 and the total cost burden for all non-hospital-based EPs to attest was $280,891,664. We solicited comments on the estimated percentages and the numbers of (registered) EPs that will attest to Set B objectives and measures in CY 2011, but did not receive any on this issue.

Although, as we proposed, we continue to have an attestation requirement in § 495.8(a)(1), we are revising the burden estimates for two reasons. First, as described elsewhere in this final rule, the definition of hospital-based EP has changed, resulting in about 73,000 outpatient hospital EPs becoming potentially eligible to participate in the EHR incentive program. Therefore, we are increasing the number of EPs in our burden estimates. We estimate that in CY 2011, there will be 521,600 non-hospital-based Medicare and Medicaid EPs (382,000 Medicare EPs, 95,500 dual Medicare/Medicaid EPs, and 44,100 Medicaid-eligible-only EPs) participating in the EHR incentive program. Second, in response to public comments, we have made significant changes in § 495.6 meaningful use objectives and measures for EPs, eligible hospitals and CAHs, which has changed the burden estimates.

In section II.A.2.d. of this final rule, Stage 1 Criteria for Meaningful Use in this final rule, we have re-categorized meaningful use objectives/measures as core criteria and menu criteria. Unless an exception applies, § 495.6(a) requires that an EP must meet all 15 Stage 1 meaningful use core criteria under § 495.6(d) and 5 out of 10 meaningful use menu criteria under § 495.6(e). The burden associated with the requirements in § 495.8 and § 495.6 is the time and effort required to attest to the required elements.

To comply with § 495.8(a)(1), we estimate that it would take an EP 8 hours 52 minutes to prepare and attest that during the EHR reporting period, the EP used certified technology, specify the technology, and satisfied all 15 mandatory Stage 1 meaningful use core criteria. We estimate that it would take an EP an additional 0.5 hours to select and attest to the clinical quality measures, in the format and manner specified by CMS. We estimate the total burden associated with this requirement for an EP is 9 hours 22 minute (8 hours 52 minutes + 0.5 hours) and the total burden for all the EPs to attest to these requirements is 4,855,827 hours (521,600 EPs × 9 hours 22 minutes). We estimate the associated cost burden for an EP to attest to these requirements is $743.08 (9 hours 22 minutes × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)), and the total cost burden for all EPs to attest to these requirements is $387,592,672 (4,855,827 hours × $79.33).

We recognize that some Stage 1 meaningful use menu set measures are easier to accomplish than others. We cannot predict which of the measures in the menu set an EP will select. Therefore, our burden estimates are based on two scenarios to illustrate how different scenarios would impact the burden incurred. Our "least burdensome" or "low" scenario of meaningful use demonstration assumes that an EP defers the five most burdensome objectives/measures while our "most burdensome" or "high" scenario of meaningful use demonstration assumes that an EP defers the five least burdensome meaningful use menu set measures. We recognize that in reality, nothing is absolute, and we have no basis for estimating the "all low" or "all high" scenario and have therefore created estimates for both. To compensate for the uncertainties of selection of meaningful use criteria by an EP, we use the averages of the "high" and "low" scenario estimates in Table 33. Section 495.6(a) requires that an EP must meet five out of 10 Stage 1 meaningful use menu set measures (unless exceptions apply). The burden involved is the time and effort to select and attest to the meaningful use menu set measures. In the "low" scenario, we estimate that an EP may defer the five most burdensome meaningful use measures. We estimate it will take an EP 42 minutes to comply with the remaining five Stage 1 meaningful use menu set measures. We estimate the total burden for all 521,600 EPs to comply with the meaningful use menu set criteria is 365,120 hours (521,600 EPs × 42 minutes). In the high scenario, we estimate that an EP may defer the five least burdensome meaningful use criteria. We estimate that it will take an EP 2 hours 40 minutes to comply with the remaining five Stage 1 meaning use menu measures. We estimate that the total burden for all 521,600 EPs to comply with the meaningful use menu set criteria is 1,390,586 hours (521,600 EPs × 2 hours 40 minutes). Based on the two scenarios, the average burden for an EP to comply with meaningful use menu set criteria is 1 hour 41 minutes ((42 minutes + 2 hours 40 minutes)/2). Based on the two scenarios, the average burden for all EPs to comply with meaningful use menu set criteria is 877,853 hours ((365,120 hours + 1,390,586 hours)/2). We estimate the cost burden for an EP to comply with the "low" scenario Stage 1 meaningful use menu criteria is $55.53 (42 minutes × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)), and the total cost burden for all 521,600 EPs to comply is $28,964,970 (521,600 EPs × $55.53). We estimate that the cost burden for an EP to comply with the "high" scenario Stage 1 meaningful use menu criteria is $211.49 (2 hours 40 minutes × $79.33), and the total cost burden for all EPs is $110,315.156 (521,600 EPs × $211.49). The average cost burden estimate for an EP to comply with the meaningful use menu set criteria is $133.51 (($55.53 + $211.49)/2). The average cost burden estimate for all 521,600 EPs to comply with meaningful use menu set criteria is $69,640,063 (($28,964,970 + $110,315.156)/2).

In the proposed rule, we expected that there would be steady growth in the number of participating EPs. We estimated that in 2012, there would be 447,400 non-hospital-based Medicare, and Medicaid EPs (326,900 Medicare EPs, 81,700 dual Medicare/Medicaid EPs and 38,800 Medicaid-eligible-only EPs) qualified to receive EHR incentive payment. We estimated that the burden for meeting § 495.8(a)(2), which required attestation for most meaningful use measures, and electronic reporting of clinical quality measures in CY 2012, would be 0.5 hours for an EP to attest to the Set A objectives and measures and 8 hours to gather information and attest to the Meaningful Use Set B objectives/measures. For burden estimate purposes, we estimated that all 447,400 non-hospital-based Medicare, and Medicaid EPs might attest. We estimated that the total annual attestation burden for all EPs was 223,700 hours for the Set A objectives/measures and 3,579,200 hours for Set B objectives/measures. We estimated that the associated cost burden was $39.67 for the Set A meaningful use objectives/measures and $634.64 for the Set B meaningful use objectives/measures. The total cost burden for all EPs was $17,746,121 for Set A and $283,937,936

for Set B. We invited comments on the estimated percentages and the numbers of registered EPs that would attest to EHR technology used and Meaningful Use Set A and Set B objectives/measures in CY 2012, but we did not receive any comments on this issue.

We expect steady growth in EPs in CY 2012. In the final rule, based on legislation altering the definition of "hospital-based," we are increasing our estimates of participating EPs, and estimate that in CY 2012, there will be about 527,254 non-hospital-based Medicare and Medicaid EPs (385,954 Medicare EPs, 96,500 dual Medicare/Medicaid EPs and 44,800 Medicaid-eligible-only EPs) who are qualified to receive EHR incentive payments. The Stage 1 meaningful use criteria (core and menu sets) are the same for CY 2011 and CY 2012. We estimate that it would take 8 hours 52 minutes for an EP to attest that during the EHR reporting period, the EP used certified technology, specify the technology, and satisfied all 15 mandatory Stage 1 meaningful use core criteria. We estimate the total burden associated with this requirement for all EPs is -4,675,161 hours (527,254 EPs × 8 hours 52 minutes). The associated cost burden for an EP to comply with this requirement is $703.42 (8 hours 52 minute × $79.33) and the associated cost burden for all EPs is $370,880.589 (44,675,161 hours × $79.33 (mean hourly rate of physicians based on the May 2008 Bureau of Labor Statistics)).

The Stage 1 meaningful use objectives and measures are the same for CY 2011 and CY 2012. Therefore, in CY 2012, the burden associated with attesting to Stage 1 meaningful use core and menu criteria for an EP is the same as CY 2011. Again, we cannot predict which of the measures in the menu set will be selected by an EP. Therefore, as explained above, we use a "low" and "high" scenario to estimate burden. For the "low" scenario, we estimate it will take an EP 42 minutes to attest to five Stage 1 meaningful use menu-set measures. The total burden for all 527,254 EPs, therefore, would be estimated at 369,078 hours (527,254 EPs × 42 minutes). Under the "high" scenario, we estimate it will take 2 hours 40 minutes for an EP to attest to five Stage 1 meaningful use menu-set criteria. The total burden for all 527,254 EPs, therefore, is estimated to be 1,405,659 hours (527,254 EPs × 2 hours 40 minutes). Based on the two scenarios, the average burden hours for an EP to attest to meaningful use menu set measures is 1 hour 41 minutes ((42 minutes + 2 hours 40 minutes)/2), and the total average burden for all EPs is 887,369 hours ((369,078 hours + 1,405,659 hours)/2). Under the "low scenario," we estimate that the cost burden for an EP is $55.53 (42 minutes × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)), and the total cost burden for all 527,254 EPs to comply with is $29,278,942 (527,254 EPs × $55.53). For the "high scenario," we estimate that the cost burden is $211.49 (2 hours 40 minutes × $79.33), and the total cost burden for all EPs is $111,510,942 (527,254 EPs × $211.49). The average cost burden is $133.51 (($55.53 + $211.49)/2). The average cost burden for all 527,254 EPs is $70,394,942 (($29,278,942 + 111,510,942)/2).

Section 495.8(a)(2)(iii) requires that for CY 2012, EPs must report electronically to CMS, or, in the case of Medicaid EPs, the States, clinical quality information in the form and manner specified by CMS. We have limited the required measures only to those that can be automatically calculated by a certified EHR, and to those for which we have electronic specifications currently available and we are able to post as final by the date of display of this final rule. The burden associated with this requirement is the time and efforts to report the required clinical quality measures. We estimate the burden for an EP to comply with this requirement is 0.5 hours and the total burden for all EPs to comply with this requirement is 263,627 hours (527,254 EPs × 0.5 hours). We believed that an EP may assign a medical secretary to submit the specific clinical quality measures to CMS or the States. We estimate the cost burden for an EP to comply with this requirement is $7.40 (0.5 hours × $14.81 (mean hourly rate of medical secretaries based on the May 2008 Bureau of Labor Statistics)) and the cost burden for all EPs to comply with this requirement is $3,904,316 (263,627 hours × $14.81).

To estimate capital costs for EPs, we assume a certified EHR system will cost roughly $54,000. If 521,600 EPs adopt these EHRs, total capital costs prior to incentives would be roughly $23.9 billion. We also estimate that in 2011, $0.2 billion of Medicare incentive payments and $0.2 billion of Medicaid incentive payments would be provided to EPs under a low scenario, and $0.6 billion Medicare incentive payments and $0.9 billion of Medicaid incentive payments would be provided to EPs under a high scenario to help offset those costs. Therefore, we estimate that total net capital costs for EPs in 2011 would be $23.5 billion ($23.9 billion − $0.2 billion − $0.2 billion) under a low scenario and $22.4 billion ($23.9 billion − $0.6 billion − $0.9 billion). These capital costs would decrease over the course of the EHR incentive programs as additional incentives are provided. Therefore, in 2012, the total net capital costs for EPs would be $22.1 billion ($23.5 billion − $1.0 billion of Medicare incentives − $0.4 billion of Medicaid incentives) under the low scenario and 419.0 billion ($22.4 billion − $2.3 billion − $1.1 billion) under the high scenario.

As with EPs, for eligible hospitals and CAHs, we proposed, at section 495.8(b) of the proposed rule, that hospitals demonstrate they are meaningful EHR users through an attestation mechanism. As with EPs, we divided meaningful use criteria into Sets A and B. We estimated that it would take an eligible hospital or CAH 0.5 hours to attest to the requirements in § 495.8(b)(1)(i) and (ii) including the Set A meaningful use objectives/measures, .0.5 hours to select and attest to the hospital quality measures, and 7 hours to comply with gathering the information, attesting and reporting Set B objectives/measures. Therefore, the estimated the total burden for all 5,011 Medicare and Medicaid eligible hospitals and CAHs (3,620 acute care hospitals, 1,302 critical access hospitals, 78 Medicaid children's hospitals, and 11 Medicaid cancer hospitals) equaled 5,011 hours. For Set B objectives and measures, we estimated the total burden at 35,077 hours.

We believed that an eligible hospital or CAH might assign an attorney to attest on their behalf. We estimated the cost burden for an eligible hospital or CAH to attest to the Set A and hospital quality requirements was $59.98 and the total estimated annual cost burden for all eligible hospitals and CAHs to attest was $300,560. For Set B objectives/measures, we estimated a per-hospital cost burden of $419.86, and a total cost burden of $2,103,918, not including capital costs. We solicited public comments on the estimated percentages and the numbers of (registered) eligible hospitals and CAHs that would attest in FY 2011, but we did not receive any comments on this issue. We also invited comments on the type of personnel or staff that would mostly likely attest on behalf of eligible hospitals and CAHs, but we did not receive any comments on this issue.

For the final rule, as proposed, § 495.8(b) will require demonstration of meaningful use through an attestation mechanism. However, as with EPs, we have revised the burden estimates due to the changes in meaningful use

objectives and measures, in response to comments. Unless an exception applies, § 495.6(b) requires that an eligible hospital or CAH must meet all 14 Stage 1 meaningful use core criteria under § 495.6(f) and five out of 10 meaningful use menu criteria under § 495.6(g). The burden associated with the requirements in § 495.8 and § 495.6 is the time and effort required to attest to the required elements.

To comply with § 495.8(b)(1), we estimate that it would take an eligible hospital or CAH 8 hours 42 minutes to prepare and attest that during the EHR reporting period, the hospital or CAH used certified technology, specify the technology, and satisfied all 14 mandatory Stage 1 meaningful use core criteria. We estimate that it will take an eligible hospital or CAH an extra 0.5 hours to select and attest to the hospital quality measure, in the format and manner specified by CMS. We estimate the total burden associated with this requirement for an eligible hospital or CAH is 9 hours 12 minutes (8 hours 42 minutes + 0.5 hours) and the total burden all eligible hospitals and CAHs to attest to these requirements is 46,101 hours (9 hours 12 minutes × 5,011 hospitals). We believe an eligible hospital or CAH may use an attorney to attest on their behalf. We estimate the associated cost burden for an eligible hospital or CAH to attest to these requirements is $551.82 (9 hours 12 minutes × $59.98 (mean hourly rate for attorneys based on the May 2008 Bureau of Labor Statistics)) and the total cost burden for all eligible hospitals and CAHs to attest to these requirements is $2,765,150 ($551.82 × 5,011 hospitals and CAHs)).

We recognize that some Stage 1 meaningful use menu criteria are easier to accomplish than others. Therefore, as with the EPs, our burden estimates are based on a "low" and "high" scenario. Unless an exception applies, § 495.6(b) requires that an eligible hospital or CAH must meet five out of 10 Stage 1 meaningful use menu criteria. The burden involved is the time and effort to select and attest to the meaningful use menu-set measures. Under the "low" scenario, we estimate it will take an eligible hospital or CAH 42 minutes to attest to five Stage 1 meaningful use menu-set measures, resulting in a total burden for all 5,011 eligible hospitals and CAHs of 3,508 hours (5,011 hospitals × 42 minutes). Under the high scenario, we estimate it will take an eligible hospital or CAH 3 hours 30 minutes to attest to five Stage 1 meaningful use menu-set measures, resulting in a total burden for all 5,011 eligible hospitals and CAHs of 17,539 hours (5,011 hospitals × 3 hours 30 minutes). Based on the two scenarios, the average burden is 2 hours 6 minutes (42 minutes + 3 hours 30 minutes)/2), and the average burden for all eligible hospitals and CAHs is 10,523 hours (3,508 hours + 17,539 hours)/2).

We believe an eligible hospital or CAH may use an attorney to attest on their behalf. For menu-set meaningful use criteria, low scenario, we estimate the associated cost burden for an eligible hospital or CAH is $41.99 (42 minutes × $59.98 (mean hourly rate for attorneys based on the May 2008 Bureau of Labor Statistics)) and the total cost burden for all eligible hospitals and CAHs is $210,392 ($41.99 × 5,011 hospitals and CAHs). For menu-set meaningful use criteria, high scenario, we estimate the associated cost burden for an eligible hospital or CAH is $209.93 (3 hours 30 minutes × $59.98) and the total cost burden for all eligible hospitals and CAHs is $1,051,959 ($209.93 × 5,011 hospitals and CAHs). Based on the two scenarios, the average cost burden for an eligible hospital or CAH to attest to meaningful use menu set criteria is $125.96 (($41.99 + $209.93)/2). The average burden for all eligible hospitals and CAHs to attest to meaningful use menu set criteria is $631,176 (($210,392 + $1,051,959)/2).

As with EPs, our proposed regulations (at § 495.8(b)(2)) required that for FY 2012 and subsequent years, eligible hospitals and CAHs demonstrate meeting most meaningful use criteria through attestation, and electronically report hospital quality measures. As with EPs, we divided meaningful use objectives and measures into Sets A and B. For Set A, we estimated that it would take an eligible hospital or CAH 0.5 hours to attest to the requirements in § 495.8(b)(2). For Set B, we estimated it would take an eligible hospital or CAH 7 hours to gather information and attest. Assuming that 5,011 hospitals might attest, we estimated that the total annual attestation burden for all eligible hospitals and CAHs was 2,506 hours (Set A) and 35,077 hours (Set B). We estimated the total annual cost burden for all eligible hospitals and CAHs to attest was $150,310 (Set A) and $2,103,918 (Set B). We invited public comments on the estimated percentages and the numbers of registered EPs that would attest to EHR technology used in CY 2012, but we did not receive any comments on this issue.

In the final rule, we also require that for FY 2012, eligible hospitals and CAHs demonstrate meeting meaningful use criteria through attestation, except for clinical quality measures, which must be electronically reported to CMS or the States. We do not expect growth in the number of eligible hospitals or CAHs. The meaningful use criteria (core and menu sets) are the same for FY 2011 and FY 2012. To comply with § 495.8(b)(1), we estimate that it would take an eligible hospital or CAH 8 hours 41 minutes to prepare and attest that during the EHR reporting period, the eligible hospital or CAH used certified technology, specify the technology, and satisfied all 14 mandatory Stage 1 meaningful use core criteria. We estimate the total burden associated with this requirement for all eligible hospitals and CAHs to attest to these requirements is 43,596 hours (8 hours 42 minutes × 5,011 hospitals). We believe an eligible hospital or CAH may use an attorney to attest on their behalf. We estimate the associated cost burden for an eligible hospital or CAH to attest to these requirements is $521.83 (8 hours 42 minutes × $59.98 (mean hourly rate for attorneys based on the May 2008 Bureau of Labor Statistics)) and the total cost burden for all eligible hospitals and CAHs to attest to these requirements is $2,614,870 ($521.83 × 5,011 hospitals and CAHs).

We recognize that some Stage 1 meaningful use menu criteria are easier to accomplish than others. We cannot predict which of the measures in the menu criteria will be selected by an eligible hospital or CAH. Therefore, as with EPs, our burden estimates are based on a "low" and "high" scenario. Unless an exception applies, § 495.6(b) requires that an eligible hospital or CAH must meet five out of 10 Stage 1 meaningful use menu criteria. The burden involved is the time and effort to select and attest to the meaningful use menu criteria. Under the "low" scenario, we estimate it will take an eligible hospital or CAH 42 minutes to attest to five Stage 1 meaningful use menu-set measures, resulting in a total burden of 3,508 hours (5,011 hospitals × 42 minutes). Under the high scenario, we estimate it will take an eligible hospital or CAH 3 hours 30 minutes to attest to five Stage 1 meaningful use menu-set measures, resulting in a total burden of 17,539 hours (5,011 hospitals × 3 hours 30 minutes). Based on the two scenarios, the average burden for an eligible hospital or CAH to attest to meaningful use menu set criteria is 2 hours 6 minutes ((42 minutes + 3 hours 30 minutes)/2), and the average burden hours for all eligible hospitals and CAHs is 10,523 hours ((3,508 hours + 17,539 hours)/2).

We believe an eligible hospital or CAH may use an attorney to attest on their behalf. For menu-set meaningful use criteria, low scenario, we estimate

the associated cost burden for an eligible hospital or CAH is $41.99 (42 minutes × $59.98) and the total cost burden for all eligible hospitals and CAHs is $210,392 ($41.99 × 5,011 hospitals and CAHs). For menu-set meaningful use criteria, high scenario, we estimate the associated cost burden for an eligible hospital or CAH is $209.93 (3 hours 30 minutes × $59.98) and the total cost burden for all eligible hospitals and CAHs is $1,051,959 ($209.93 × 5,011 hospitals and CAHs). Based on the two scenarios, the average cost burden for an eligible hospital or CAH to attest to meaningful use menu set criteria is $125.96 (($41.99 + $209.93)/2). The average burden for all eligible hospitals and CAHs to attest to meaningful use menu set criteria is $631,175 (($210,392 + $1,051,959)/2).

Section 495.8(b)(2)(iii) requires that for FY 2012, eligible hospitals or CAHs must report electronically to CMS, or, in the case of Medicaid hospitals, the States, clinical quality information in the format and manner specified by CMS. Given that we limit the required measures only to those that can be automatically calculated by a certified EHR and to those for which we have electronic specifications currently available that we are able to post as final by date of display of this final rule. The burden associated with this requirement is the time and effort to report the required hospital quality measures. We estimate the burden for an eligible hospital or CAH to comply with this requirement is 0.5 hours and the total burden for all eligible hospitals or CAHs to comply with this requirement is 2,506 hours (5,011 hospitals and CAHs × 0.5 hours). We believe that an eligible hospital or CAH may assign a medical secretary to submit the specific hospital clinical quality measures to CMS or the States. We estimated the cost burden for an eligible hospital or CAH to comply with this requirement is $7.40 (0.5 hours × $14.81 (mean hourly rate of medical secretary based on May 2008 Bureau of Labor Statistics)) and the cost burden for all eligible hospitals or CAHs to comply with this requirement is $37,107 (2,506 hours × $14.81).

To estimate capital costs for eligible hospitals and CAHs, consistent with the sources cited in section V.G.4 of this final rule, we assume that achieving meaningful use will require roughly a $5 million capital investment for the average hospital. If 5,011 hospitals adopt these EHRs, total capital costs prior to incentives would be roughly $25.1 billion. We also estimate that in 2011, $0.2 billion of Medicare incentive payments and $0.4 billion of Medicaid incentive payments would be provided to eligible hospitals and CAHs under the low scenario, and $0.5 billion of Medicare incentive payments and $0.8 billion of Medicaid incentive payments would be provided to eligible hospitals and CAHs under the high scenario to help offset those costs. Therefore, we estimate that total net capital costs for hospitals in 2011 would be $24.5 billion ($25.1 billion − $0.2 billion − $0.4 billion) under the low scenario and $23.8 billion ($25.1 billion − $0.5 billion − $0.8 billion) under the high scenario. These capital costs would decrease over the course of the EHR incentive programs as additional incentives are provided. Therefore, in 2012, the total net capital costs for hospitals would be $23.5 billion ($24.5 billion − $0.9 billion of Medicare incentives − $0.1 billion of Medicaid incentives) under the low scenario, and $21.4 billion ($23.8 billion − $2.1 billion of Medicare incentives − $0.3 billion of Medicaid incentives) under the high scenario.

Comment: Some commenters believed that CMS grossly underestimated the cost and hour burden for EPs, eligible hospitals and CAHs to comply with meaningful use Set A and Set B measures. Some commenters stated that we should take into consideration all the time required to prepare all attestation of meaningful use measures, including the manual counting of numerators and denominators in our burden estimates.

Response: Prior to and after the publication of the proposed rule, we have worked with ONC to ensure that our meaningful use objectives/measures are well aligned with certified EHR technology. In the final rule, we only require meaningful use measures that can be achieved by the functionality and capability of certified EHR technology. Furthermore, based on comments, we have explained in section II.A.2.d. of this final rule that we are including a substantial amount of flexibility in the final rule to lower the burden for EPs, eligible hospitals and CAHs in meeting the attestation and demonstration of meaningful use criteria. Some examples of such flexibility are the categorization of Stage 1 meaningful use core and menu (optional) criteria, reducing the number of meaningful use objectives/measures for 2011 and 2012, limiting the denominators, in certain cases, only to patients whose records are maintained using certified EHR technology, and lowering thresholds for many of the meaningful use measures. We believe these changes reduce burden without compromising the intent of the Congress, and the ability of EHR technology to begin to improve health care quality, efficiency, and outcomes. We have considered the comments and we have made some revisions on our previous burden estimates. While this requirement is subject to PRA, we have no way of accurately quantifying the burden. We will continue to monitor the burden associated with the implementation of EHR technology as our experience continues to grow and as EHR technology continues to evolve.

Comment: CMS received numerous comments regarding the burden (economic and other) of reporting on the large number of measures and the overall quality reporting burden this will add to EPs and other healthcare providers. Others suggested reporting on significantly smaller set of measures.

Response: As we have explained in section II.A.3.(d) of this final rule, we have reduced the reporting burden by decreasing the number of required clinical quality measures and limiting measures to those that can be automatically calculated by a certified EHR. We believe that the proposed burden estimate, which was estimated to be an additional 0.5 hours in 2011 and 2012, is reasonable and we are finalizing it.

Table 20 below lists the objectives and associated measures in which we estimate the burden to fulfill "core set," "menu set", and clinical quality measures requirements. Estimates of total capital costs at the bottom of Table 20 are derived from the estimates used in the "Industry Costs" section in Section V.G.4. of this final rule.

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TABLE 20: Burden and Capital Costs associated with Meaningful Use Objectives and Associated Measures

Stage 1 Objectives (EPs)	Stage 1 Objectives (Hospitals)	Stage 1 Measures	Burden Estimate per Respondent (EPs)	Burden Estimate per Respondent (Hospitals)	Capital Costs
CORE SET					
Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines	More than 30 percent of all unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21or 23)have at least one medication order entered using CPOE	10 minutes	10 minutes	TBD - cost of a CPOE module; additionally, the cost of extra functionality to generate numerator and denominator information automatically
Implement drug-drug and drug-allergy checks	Implement drug-drug and drug-allergy checks	The EP/eligible hospital/CAH has enabled this functionality for the entire EHR reporting period	1 minute	1 minute	TBD - cost of associated with medication error e-prescribing functions
Generate and transmit permissible prescriptions electronically (eRx)		More than 40 percent of all permissible prescriptions written by the EP are transmitted electronically using certified her technology	10 minutes		TBD - cost of an e-prescribing system; additionally, the cost of extra functionality to generate numerator and denominator information automatically

Record Demographics • Preferred language • Gender • Race • Ethnicity • Date of birth	Record Demographics • Preferred language • Gender • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data	10 minutes	10 minutes	TBD – cost of functionality that can incorporate this information is coded
Maintain an up-to-date problem list of current and active diagnoses	Maintain an up-to-date problem list of current and active diagnoses	More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data.	10 minutes	10 minutes	TBD - cost of functionality that can incorporate diagnoses in coded format
Maintain active medication list	Maintain active medication list	More than 80 percentof all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data	10 minutes	10 minutes	TBD - cost of functionality that can incorporate medication information in coded format

Maintain active medication allergy list	Maintain active medication allergy list	More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data	10 minutes	10 minutes	TBD - cost of functionality that can incorporate medication allergy information in coded format
Record and chart changes in vital signs: • Height • Weight • Blood pressure • Calculate and display BMI • Plot and display growth charts for children 2-20 years, including BMI	Record and chart changes in vital signs: • Height • Weight • Blood pressure • Calculate and display BMI • Plot and display growth charts for children 2-20 years, including BMI	For more than 50 percent of all unique patients age 2 and over seen by the EP or admitted to eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight and blood pressure are recorded as structure data	10 minutes	10 minutes	TBD - cost of functionality that can incorporate this information in coded format
Record smoking status for patients 13 years old or older	Record smoking status for patients 13 years old or older	More than 50 percentof all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have "smoking status" recorded	10 minutes	10 minutes	TBD - cost of functionality that can incorporate this information in coded format
Implement one clinical decision support rule relevant to specialty or high clinical priority with the ability to track compliance to that rule	Implement one clinical decision support rule relevant to specialty or high clinical priority with the ability to track compliance to that rule	Implement one clinical decision support rule	1 minute	1 minute	TBD - cost associated with clinical decision support functionality

Report ambulatory quality measures to CMS or the States	Report hospital quality measures to CMS or the States	For 2011, provide aggregate numerator and denominator through attestation as discussed in section II(A)(3) of the final rule For 2012, electronically submit the measures as discussed in section II(A)(3) of the final rule	10 minutes	10 minutes	TBD - cost of the functionality to capture and report on quality measures
Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies), upon request	Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, allergies, discharge summary, procedures), upon request	More than 50 percentof all patients of the EP or the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days	10 minutes	10 minutes	
	Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request	More than 50 percent of all patients who are discharged from an eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it		10 minutes	TBD - cost an EHR system capable of storing this information and transmitting it to patients

Provide clinical summaries for patients for each office visit		Clinical summaries provided to patients for more than 50 percent of all office visits within 3 business days	10 minutes		TBD - cost an EHR systems capable of storing this information and transmitting to patients
Capability to exchange key clinical information (for example, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information	1 hour	1 hour	TBD - cost an EHR system capable of storing this information and transmitting to providers and patient authorized entities
*Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	*Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities	Conduct or review a security risk analysis per 45 CFR 164.308 (a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process	6 hours	6 hours	N/A as conducting or reviewing a security risk analysis does not necessarily hinge on the purchase
CORE SET BURDEN			**9 hours 2 minutes**	**8 hours 42 minutes**	
MENU SET					

Implement drug-formulary checks	Implement drug-formulary checks	The EP/eligible hospital/CAH has enabled this functionality and has access to at least one internal or external drug formulary for the entire EHR reporting period	1 minute	1 minute	TBD - cost of associated with medication error e-prescribing functions
	Record advance directives for patient 65 years old or older	More than 50 percentof all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) have an indication of an advance directive status recorded		1 minute	
Incorporate clinical lab-test results into EHR as structured data	Incorporate clinical lab-test results into EHR as structured data	More than 40 percentof all clinical lab tests results ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data	10 minutes	10 minutes	TBD - cost of extra functionality to generate numerator and denominator information automatically

Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach	Generate at least one report listing patients of the EP, eligible hospital, or CAH with a specific condition.	10 minutes	10 minutes	TBD – cost of having an EHR registry function
Send reminders to patients per patient preference for preventive/ follow up care		More than 20 percentof all unique patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period	1 minute		TBD - cost of functionality to send reminders to patients

Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, allergies) within four business days of the information being available to the EP		More than 10 percentof all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information	10 minutes		TBD - cost an EHR system capable of storing this information and making it continuously available to patients
Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate	More than 10 percentof all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources	10 Minutes	10 Minutes	
The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation	The EP, eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23)	10 minutes	10 minutes	TBD - cost an e-prescribing system capable of medication reconciliation

The EP, eligible hospital or CAH who transitions their patient to another setting of care or refers their patient to another provider of care should provide summary care record for each transition of care and referral	The EP, eligible hospital or CAH who transitions their patient to another setting of care or refers their patient to another provider of care should provide summary care record for each transition of care and referral	The EP, eligible hospital or CAH who transitions or refers their patient to another setting of care or provider of care should provides summary of care record for more than 50 percent of transitions of care and referrals	10 minutes	10 minutes	TBD - cost an EHR system capable of storing this information and transmitting it to patients
Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission according to applicable law and practice	Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission according to applicable law and practice	Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, eligible hospital or CAH submits such information have the capacity to receive the information electronically)	1 hour	1 hour	TBD - cost associated with functionality that can capture immunization information and submit that information to immunization registries

	Capability to provide electronic submission of reportable (as required by state or local law) lab results to public health agencies and actual submission according to applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which eligible hospital or CAH submits such information have the capacity to receive the information electronically)		1 hour	TBD - cost associated with functionality that can capture lab results information and submit that information to public health agencies
Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice	Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission according to applicable law and practice	Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP. eligible hospital or CAH submits such information have the capacity to receive the information electronically)	1 hour	1 hour	TBD - cost associated with functionality that can capture syndromic surveillance data and submit that information to public health agencies
MENU SET LEAST BURDENSOME CRITERIA			42 minutes	42 minutes	Hospital: $5 million to install; $1 million annual maintenance/ training costs

MENU SET MOST BURENSOME CRITERIA	2 hours 40 minutes	3 hours 30 minutes	
Time to Attest to & Report CQM	30 minutes	30 minutes	
TOTAL – CORE SET (including CQM) + LEAST BURDENSOME MENU SET CRITERIA	10 hours 14 minutes	9 hours 54 minutes	
TOTAL – CORE SET(including CQM) + MOST BURENSOME MENU SET CRITERIA	12 hours 12 minutes	12 hours 42 minutes	

*This burden estimate assumes that covered entities are already conducting and reviewing these risk analyses under current HIPAA regulations. Therefore, we have not accounted for additional burden associated with the conduct or review of such analyses.

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B. ICRs Regarding Participation Requirements for EPs, Eligible Hospitals, and CAHs (§ 495.10)

Since the EHR incentive payment program is new, we do not have enough information to estimate the information collection requirements burden beyond the first payment year for an EP, eligible hospital, or CAH for this provision. Furthermore, the EPs, eligible hospitals, and CAHs can enroll any time during the first 5 years; therefore, it is difficult to predict with certainty the burden beyond the first payment year as the burden depends on the number of participants. Therefore, we provide a best estimate of what we believe the burden associated with this provision might be.

For the proposed rule, § 495.10(a) through (c), we estimated that all 442,600 non-hospital-based Medicare, and Medicaid EPs would register in 2011 to receive an EHR incentive payment, and that it would take no more than 0.5 hours to complete the registration, resulting in a total estimated annual registration burden for all EPs of 221,300 hours (442,600 EPs × 0.5 hours). As we could not predict whether an EP or a medical secretary (on the EP's behalf) would register, we did one high-end and one low-end burden estimate. The cost burden for an EP who chose to register in the EHR incentive payment program himself or herself was $39.67 (0.5 hours × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)), with a total estimated annual cost burden for all EPs of $17,555,729 (221,300 hours × $79.33). Similarly, the cost burden for an EP who chose to use a medical secretary to register on their behalf was $7.41 (0.5 hours × $14.81), with a total estimated annual cost burden for all EPs of $3,277,453 (221,300 hours × $14.81). We used the average of the two estimates in the tally in Table 34 of the proposed rule. We invited comments on whether we should use the higher cost burden estimate ($17,555,729) or the lower cost burden estimate ($3,277,453), but we did not receive any comments on this issue. We invited public comments on the estimated percentages or the numbers of EPs that will register in CY 2011 and subsequent years, but we did not receive any comments on this issue.

We are finalizing both the lower cost estimate using the medical secretary as the personnel registering for the EP and the high cost estimate of the EP registering him or herself. Due to the revised estimates of non-hospital-based EPs eligible for the EHR incentive program, we are revising our burden estimates to reflect this change. In the final rule, we estimate that 521,600 non-hospital-based Medicare, and Medicaid EPs may register in CY 2011 to receive an EHR incentive payment. We believe that an EP may use a medical secretary to register on his/her behalf (low burden) or the EP may register him or herself (high burden). We estimate that it would take no more than 0.5 hours to complete the registration. The low cost burden for a medical secretary to register an EP is $7.41 (0.5 hours × $14.81 (mean hourly rate of medical secretaries based on the May 2008 Bureau of Labor statistics)). The total estimated annual registration burden hours for the low cost estimate is 260,800 (521,600 EPs × 0.5 hours) in the first payment year. The total estimated low cost burden for all EPs to register in CY 2011 is $3,862,448 (260,800 hours × $14.81). The high cost burden for an EP to register him or herself is $39.67 (0.5 hours × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)). In the first payment year, the total estimated annual registration burden hours for the high cost estimate is 260,800 (521,600 EPs × 0.5 hours). The total estimated high cost burden for all EPs to register in CY 2011 is $20,689,264 (260,800 hours × $79.33). We only use the average of the two estimates in the tally in Table 34.

Section 495.10(d) proposed that if there were subsequent changes in the initial registration information, the EP was responsible for providing us with updated changes in the manner specified by us. Based on our experience with provider enrollment, we estimated that about 11 percent of the Medicare and Medicaid EPs might need to update their registration information during a 1-year period. We estimated that 49,214 EPs (11 percent) might only have one occasion that required updating of information in a given year. For each occasion, we estimated that it would take no more than 0.5 hours to notify us of the changes. With that, we estimated that the annual total burden hours for 49,214 EPs to update changes were 24,607. However, we could not predict if the EP would update the registration information himself or herself or assign a medical secretary to do it. Therefore, we did two burden estimates for an EP and his/her medical secretary. The cost burden for an EP who chose to update the registration information himself or herself was $39.67. The total estimated annual cost burden for all 49,214 EPs to update registration information themselves was $1,952,073. Similarly, the cost burden for the EP who chose to use a medical secretary to update registration information on his/her behalf was $7.41. The total estimated annual cost burden for 49,214 EPs who chose to use medical secretaries to update registration information on their behalf was $364,429. We used the average of the two estimates in the tally in Table 34. We invited comments on whether we should use the higher cost burden estimate ($1,952,073) or the lower cost burden estimate ($364,429) but we did not receive any comments on this issue. We also invited public comments on the estimated percentages and the numbers of EPs that will need to submit subsequent registration changes to us over the course of the EHR incentive payment program but we did not receive any comments on this issue.

We are finalizing both the lower cost estimate using the medical secretary as the personnel to update registration information for the EP and the high cost estimate of the EP updating their registration information. Due to the revised estimates of non-hospital-based EPs eligible for the EHR incentive program pursuant to legislative inclusion of EPs who practice in outpatient hospital setting, we are revising our burden estimate for this requirement to reflect this change. In the final rule, we estimate that about 11 percent of the Medicare and Medicaid EPs may need to update their registration information during a 1-year period. We estimate that 57,998 EPs (527,254 (revised estimated number of EPs for CY 2012) × 11 percent) may only have one occasion that requires them to update their information in a given year. For each occasion, we estimate that it will take no more than 0.5 hours to notify us of the changes. With that, we estimate that the annual total burden hours for 57,998 EPs to update registration changes are 28,999. The lower cost burden estimate for a medical secretary to update an EP's registration is $7.41 ($14.81 (mean hourly rate for medical secretary based on the May 2008 Bureau of Labor Statistics) × 0.5 hours). The total lower cost burden for all EPs to update registration information is $429,475 (28,999 hours × $14.81). The high cost burden for an EP to update their own registration information is $39.67 (0.5 hours × $79.33 (mean hourly rate for physicians based on May 2008 Bureau of Labor Statistics)). The total estimated annual high cost burden to update registration information is $2,300,491 (28,999 hours × $79.33). We only use the average of the two estimates in the tally in Table 34.

In § 495.10(a) and (b), we estimate that in FY 2011, there are 5,011 Medicare and Medicaid eligible hospitals, and CAHs that may be qualified to receive EHR incentive payment. Since we cannot predict how many eligible hospitals, and CAHs will participate in the EHR incentive payment program, we estimate that all 5,011 hospitals may register for the incentive program for burden estimate purposes. We estimate that it would take no more than 0.5 hours for an eligible hospital or CAH to register. We estimate the total annual burden hours for registration will be 2,506 (5,011 hospitals × 0.5 hours). Once the decision to participate in the incentive program is made, we believe eligible hospitals or CAHs may assign a medical secretary to submit the registration information. The cost burden for an eligible hospital or CAH to register is $7.41 (0.5 hours × $14.81 (mean hourly rate for medical secretaries based on the May 2008 Bureau of Labor Statistics)). We estimate that the total annual cost burden for eligible hospitals and CAHs to register is $37,106 (5,011 hospitals × 0.5 hours × $14.81) (mean hourly rate for medical secretaries based on the May 2008 Bureau of Labor Statistics)). We invited public comments on the estimated percentages or the number of eligible hospitals and CAHs that will register for the EHR incentive payment program in 2011 and subsequent years but we did not receive any comments on this issue. We are finalizing the burden estimates as proposed.

In § 495.10(d), we proposed that if there were subsequent changes in the initial registration information, the eligible hospital or CAH was responsible for providing us with updated information in the manner specified by us. Based on our experience with provider enrollment, we estimated that about 8 percent of the Medicare and Medicaid eligible hospitals and CAHs (5,011 hospitals and CAHs × 8 percent = 401 hospitals) might need to update their registration information during a 1-year period. We estimated that eligible hospitals in this 8 percent pool might only have 1 occasion that required updating of registration information in a given year. For each occasion, we estimated that it would take no more than 0.5 hours to notify us of the changes. With that, we estimated that the total annual burden hours for eligible hospitals and CAHs to update CMS of registration changes were 201 (401 hospitals and CAHs × 0.5 hours). We believe that eligible hospitals or CAHs might assign a medical secretary to update the registration information. We estimated the total annual cost burden for eligible hospitals and CAHs to update CMS of registration changes is $2,969 (401 hospitals and CAHs × 0.5 hours × $14.81) (mean hourly rate for medical secretaries based on the May 2008 Bureau of Labor Statistics)). We invited public comments on the estimated percentages and the numbers of eligible hospitals and CAHs that will submit subsequent registration changes to us over the course of the EHR incentive payment program but we did not receive any comments on this issue. We are finalizing the estimated burden for hospitals and CAHs that will be making subsequent registration changes for FY 2012 as proposed.

In § 495.10(e)(1), we proposed that for participation in the EHR incentive payment programs, prior to the first payment year, an EP must notify us in a specified manner as to whether he or she elects to participate in the Medicare or Medicaid EHR incentive program. We estimated that in 2011, there would be about 80,900 dual Medicare/Medicaid EPs who might make the initial Medicare and Medicaid program selection. The standard full amount of Medicaid incentive payments that an EP could receive is larger than the standard full amount for the Medicare EP incentive payments. Therefore, for burden estimate purposes, we believed that all of the 80,900 dual Medicare/Medicaid EPs might make the Medicaid program selection. We estimated that it would take no more than 0.5 hours to submit the initial Medicare or Medicaid selection notification to us. We could not predict if the EP would submit the notification to CMS himself or herself or assign a secretary to do it. Therefore, we did one high end estimate and one low end burden estimate for an EP and a medical secretary respectively. The total estimated burden hours for all the dual Medicare/Medicaid EPs to notify CMS of program selection were 40,450 in the first payment year. The cost burden for these EPs who notify CMS of Medicare or Medicaid program selection himself or herself was $39.67. The total estimated annual cost burden for all dual Medicare/Medicaid EPs to notify CMS of program selection themselves was $3,208,899. Similarly, the cost burden for an EP who chose to use a medical secretary to notify CMS of program selection was $7.41. The total estimated annual cost burden for all dual Medicare/Medicaid EPs who use medical secretaries to notify CMS of program selection was $599,065. We used the average of the two estimates in the tally in Table 34. We invited comments on whether we should use the higher cost burden estimate ($3,208,899) or the lower cost burden estimate ($599,065), but we did not receive any comments on this issue. We also invited public comments on the estimated percentages and the number of dual Medicare/Medicaid EPs that would submit initial Medicare or Medicaid program selection in 2011, 2012, 2013, or 2014 but we did not receive any comments.

In the final rule, we are finalizing both the low burden cost estimate using a medical secretary for dual-Medicare/Medicaid EPs to notify CMS of program selection and the high burden cost estimate of an EP who may do this him or herself. We have revised the total number of dual-Medicare/Medicaid EPs and the associated burden estimates pursuant to the legislative inclusion of EPs, who practice in outpatient hospital, in the incentive program. We estimate that in CY 2011, there will be 95,500 dual Medicare/Medicaid EPs who may use a medical secretary to notify CMS of the initial Medicare and Medicaid program selection. We estimate that it would take no more than 0.5 hours to submit the initial Medicare or Medicaid selection notification to us. The estimated burden for all the dual-Medicare/Medicaid EPs to comply with this requirement is 47,750 hours (95,500 EPs × 0.5 hours). The associated low cost burden for a dual-Medicare/Medicaid EP is $7.41 (0.5 hours × $14.81 (mean hourly rate for medical secretaries based on May 2008 Bureau of Labor Statistics) and the total low cost burden for all the dual-Medicare/Medicaid EPs is $707,178 (47,750 hours × $14.81). The associated high cost burden for a dual-Medicare/Medicaid EP is $39.67 (0.5 hours × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)) and the total high cost burden estimate for all dual-Medicare/Medicaid EPs is $3,788,008 (47,750 hours × $79.33). We only use the average of the two estimates in the tally in Table 34.

In § 495.10(e)(2) we proposed that EPs might switch from Medicare to Medicaid EHR incentive program or vice versa one time, and only for payment year 2014 or earlier. The burden associated with this requirement was the time required for the EP to make the Medicare/Medicaid program selection. Since we had no knowledge of how many EPs will make the subsequent changes in program selection, we assumed that all 81,700 (estimated number of dual-Medicare/Medicaid EPs for CY 2012) dual Medicare/Medicaid EPs might make subsequent program selection changes

for burden estimate purposes. We estimated that it would take no more than 0.5 hours to submit the Medicare/Medicaid selection change to us. We could not predict if the EP would submit the change to CMS himself or herself or assign a secretary to do it. Therefore, we did one high end burden estimate for an EP and one low end estimate for a medical secretary. We used the average of the two estimates in the tally in Table 34. The total estimated burden hours for all dual-Medicare/Medicaid EPs to notify CMS of program changes were 40,850 in a given year. The higher cost burden for the EP who chose to notify CMS of Medicare/Medicaid program change him or herself was $39.67. The total estimated annual cost burden for all dual Medicare/Medicaid EPs to notify CMS of program changes themselves was $3,240,630. Similarly, the lower cost burden for an EP who chose to use a medical secretary to notify CMS of program changes was $7.41. The total estimated annual cost burden for all dual-Medicare/Medicaid EPs who use medical secretaries to notify CMS of program changes was $604,989. We invited comments on whether we should use the higher cost burden estimate ($3,240,630) or the lower cost burden estimate ($604,989) but we did not received any comments on this issue. We also invited comments on the estimated percentages and the number of dual-Medicare/Medicaid EPs that would submit initial Medicare or Medicaid program changes in 2012, 2013, or 2014 but we did not receive any comments on this issue.

We are finalizing both the lower cost burden for EPs for may assign medical secretaries as the personnel to submit Medicare/Medicaid program selection changes to CMS and the high cost burden for EPs who may do this him or herself. We revised our burden estimates and the number of dual-Medicare/Medicaid EPs, pursuant to legislative inclusion of EPs who practice at outpatient hospital setting in the incentive program. For CY 2012, we estimate that there will be 96,500 dual-Medicare/Medicaid EPs. The notification will take 0.5 hours and the total burden for all dual-Medicare/Medicaid EPs will be 48,250 hours (96,500 EPs × 0.5 hours). The lower cost burden for each EP is $7.41 (0.5 hours × $14.81 (mean hourly rate for medical secretaries based on the May 2008 Bureau of Labor Statistics) and the total lower cost burden for all the dual-Medicare/Medicaid EPs will be $714,583 (48,250 hours × $14.81). The high cost burden for each EP is $39.67 (0.5 hours × $79.33 (mean hourly rate for physicians based on the May 2008 Bureau of Labor Statistics)) and the total high cost burden for all dual-Medicare/Medicaid EPs is $3,827,673 (48,250 hours × $79.33). We only use the average of the two estimates in the tally in Table 34.

C. ICRs Regarding Identification of Qualifying MA Organizations, MA–EPs and MA-Affiliated Eligible Hospitals (§ 495.202)

Section 495.202(a)(1) states that beginning with bids due in June 2011 (for plan year 2012), MA organizations seeking reimbursement for qualifying MA EPs and qualifying MA-affiliated eligible hospitals under the MA EHR incentive program are required to identify themselves to CMS in a form an manner specified by CMS, as part of submissions of initial bids under section 1854(a)(1)(A) of the Act. There is no burden associated with this requirement for qualifying MA organizations offering MA HMO plans, since they are deemed to meet the definition of HMO in 42 U.S.C. 300gg–91(b)(3) of the PHS Act in accordance with § 495.202(a)(2). However, per § 495.202(a)(3), for MA organizations offering types of MA plans other than HMOs, the burden is the amount of time it will take them to attest to the fact that they meet the definition of HMO in 42 U.S.C. 300gg–91(b)(3). We believe the burden associated with this requirement for MA organizations not offering HMO type plans would be approximately 1 hour per MA organization. We do not believe that there are any MA organizations that are not offering MA HMO type plans that will request reimbursement for qualifying MA EPs or MA-affiliated eligible hospitals under the MA EHR incentive payment program. Although the timeframe goes beyond the effective date of the proposed information collection period (3 years from the effective date of the final rule), we do not believe there are any MA organizations with potentially qualifying MA EPs or potentially qualifying MA-affiliated eligible hospitals that will need to report to us beginning in 2014 (for plan year 2015) per § 495.202(a)(4). Therefore, we believe there will be no burden associated with identification of qualifying MA organizations per § 495.202(a)(1) through (4).

Section 495.202(b)(1) and (2) require a qualifying MA organization, as part of its initial bid starting with its bid for plan year 2012, to make preliminary identification of potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals for which the organization is seeking incentive payments for the current plan year (2011). The burden associated with this requirement would be the time required for a MA organization to identify their MA-affiliated hospitals to CMS. In the proposed rule, we explained that when MAOs identify amounts of compensation per § 422.204(b)(2) and (5) they will also be identifying MA EPs per this requirement, and therefore there is will be no additional burden related to this requirement with respect to MA EPs. There are approximately 29 MA-affiliated eligible hospitals and approximately 12 MA organizations, or an average of 2.42 eligible hospitals for each MA organization. In the proposed rule, we estimated that the total burden hours for all MA organizations to identify their affiliated hospitals to CMS would be 3 hours. We believe a MA organization may use a billing clerk to identify the eligible hospital to us. The total cost burden for all MA organizations to identify their eligible hospitals to us would be $46.32.

Sections 495.202(b)(1) and (2), state that a MA organization, as part of its initial bid starting with plan year 2012, must make a preliminary identification of potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals for which the organization is seeking incentive payments for the current plan year. A qualifying MA organization must provide the following information on their MA-affiliated EPs and eligible hospitals: (A) name of the EP or eligible hospital; (B) address of the EP's practice or eligible hospital's location; and (C) NPI. We believe that it is within the customary business practices of an MA organization to keep the information in (A), (B), and (C) on file. The burden associated with this requirement would be the time required to provide this information to CMS along with an attestation that the MA EPs or MA-affiliated eligible hospitals meet the eligibility criteria. In the proposed rule, we estimated that it would take 0.5 hours for a MA organization to comply with this attestation requirement. We estimated that the total burden for all MA organizations to attest would be 6 hours. We believe that MA organizations may use an attorney to attest on their behalf. In the proposed rule, we estimated that the cost burden for a MA organization to attest is $29.99 and the total estimated cost burden for all MA organizations to attest would be $359.88.

Section 495.202(b)(4) states that all qualifying MA organizations, as part of their initial bids in June 2015 for plan year 2016, must identify potentially qualifying MA EPs and potentially

qualifying MA-affiliated eligible hospitals. An attestation that each professional or hospital either meets or does not meet the eligibility criteria must be included as part of the identification submission. We cannot estimate the collection burden for this requirement as the timeframe goes beyond the scope of the effective date of the proposed information collection period (3 years from the effective date of the final rule).

D. ICRs Regarding Incentive Payments to Qualifying MA Organizations for MA–EPs and Hospitals (§ 495.204)

Section 495.204(b)(2) requires a qualifying MA organization to report to CMS within 60 days of the close of the calendar year, the aggregate annual amount of revenue attributable to providing services that would otherwise be covered as professional services under Part B received by each qualifying MA EP for enrollees in MA plans of the MA organization in the payment year. Since the tracking of salaries or compensation for MA EPs constitutes usual and customary business practices, the only burden associated with this requirement would be the time required to submit the aggregated annual amount of revenue received by each qualifying MA EP for enrollees in MA plans of the MA organization. In the proposed rule, we estimated that there were 12 MA organizations and 28,000 MA EPs. We believe that it will take a MA organization 40 hours annually to report the required aggregate revenue data for all its salaried MA EPs, given that all the data are readily available. The total estimated annual burden hours for all MA organizations to comply with this requirement would be 480. We believe MA organizations may involve a billing clerk to report the required data to CMS. We estimated that the cost burden for a MA organization to report was $617.6 (40 hours × $15.44 (mean hourly rate of billing clerk based on the May 2008 Bureau of Labor Statistics)) and we estimated the total annual cost burden for all MA organizations to comply with this requirement would be $7,411.

Section 495.204(b)(4) states that for qualifying MA EPs who are compensated on a salaried basis, CMS requires the qualifying MA organization to develop a methodology for estimating the portion of each qualifying MA EP's salary attributable to providing services that would otherwise be covered under Part B to MA plan enrollees of the MA organization. The methodology: (i) Must be approved by CMS; (ii) may include an additional amount related to overhead, where appropriate, estimated to account for the MA-enrollee related Part B practice costs of the salaried qualifying MA EP; and (iii) methodological proposals must be submitted to CMS by June of the payment year and must be auditable by an independent third party. CMS will review and approve or disapprove such proposals in a timely manner. In the proposed rule, we estimated that it might take a MA organization one and a half hour to develop the methodology. We estimated that there are about two MA organizations that may have the need to develop the methodology. We estimated the total burden hours for the two MA organizations to develop the methodology would be 3 hours. We believed that a MA organization may use an accountant to develop the methodology. We estimated the cost burden for a MA organization was $47.48 (1.5 hours × $31.65 (mean hourly rate for accountants based on the May 2008 Bureau of Labor Statistics)), and the total cost burden for the two MA organizations to develop the methodology would be $94.95 (47.48 × 2 MA organizations).

Section 495.204(b)(5) states that for qualifying MA EPs who are not salaried, qualifying MA organizations may obtain and submit to CMS, attestations from such qualifying MA EPs as to the amount of compensation received by such EPs for MA plan enrollees of the MA organization. We estimate that about 10 percent of the MA EPs were not salaried and that was an average of 233 non-salaried EPs in each MA organization. Further, we estimate that it might take 0.25 hour to electronically obtain and compile each attestation into a document for transmission to CMS. We estimate the total burden hours for a MA organization would be 58.3, and the total estimated burden hours for all MA organizations would be 699.6 (58.3 hours × 12 MA organizations). We believe an MA organization may involve a billing clerk to compile and submit the compensation information from such attestations. We estimate the cost burden for a MA organizations to comply with this requirement would be $900.15 (58.3 hours × $15.44 (mean salary of a billing clerk based on the May 2008 Bureau of Labor Statistics)). We estimate the total annual cost burden for all MA organizations to comply with this requirement would be $10,801.82 ($900.15 × 12 MA organizations).

Section 495.204(b)(6) states that for qualifying MA EPs who are not salaried, qualified MA organizations may also have qualifying MA EPs send MA organization compensation information directly to CMS. We estimated the burden associated with this requirement is the time it would take the MA EP to send the information directly to CMS. However, we believe that the non-salaried MA EPS are employed by a third-party physician group which will be responsible for sending the required information to CMS. Again, we estimate that about 10 percent of the MA EPs are not salaried and that there is an average of 233 non-salaried EPs in each of the third-party physician groups. Further, we estimate that it might take 0.25 hour to electronically obtain and compile the information into a document for transmission to CMS. We estimate the total burden hours for a third-party physician group will be 58.3, and the total estimated burden hours for all third-party physician groups will be 699.6 (58.3 hours × 12 third-party physician group). We believe a third-party physician group may involve a billing clerk to compile and submit the compensation information. We estimate the cost burden for a third-party physician group to comply with this requirement will be $900.15 (58.3 hours × $15.44 (mean salary of a billing clerk based on the May 2008 Bureau of Labor Statistics)). We estimate the total annual cost burden for all third-party physician groups to comply with this requirement will be $10,801.82 ($900.15 × 12 third-party physician groups). Note that this is the same burden we estimate with respect to § 422.204(b)(5). Further, an MAO will either submit non-salary information directly to CMS, or it will have someone else do it on behalf of the MA EPs with respect to that MAO. We believe the burden related to § 422.204(b)(6) is counted in the burden we already projected with respect to § 422.204(b)(5). We do not believe any MAO will submit under both § 422.204(b)(5) and (6).

E. ICRs Regarding Meaningful User Attestation (§ 495.210)

Section 495.210(b) requires qualifying MA organizations to attest within 60 days after the close of a calendar year whether each qualifying MA EP is a meaningful EHR user. We anticipate that the adopted EHR technology will capture the data for determination whether each qualifying MA EP is a meaningful EHR user. We estimate the burden associated with this requirement would be the time necessary to attest to the required information. We estimated that there were approximately 12 MA organizations and approximately 28,000 MA EPs, or an average of approximately 2,333 MA EPs affiliated with each qualifying MA organization. We believe that it would take a MA organization about 40 hours annually to attest whether each qualifying MA EP is a

meaningful user, given that all the data are captured in the certified EHR technology and that meaningful use will be demonstrated through the continued reporting of HEDIS data. We estimate the total estimated annual burden hours for all MA organizations to comply with this requirement will be 480. We believe MA organizations might involve an attorney to attest on their behalf. We estimate the cost burden for a MA organization to attest will be $2,399 (40 hours × $59.98 (mean hourly rate of attorney based on the May 2008 Bureau of Labor Statistics)). We estimate the total annual cost burden for all MA organizations to comply with attestation for MA EPs will be $28,790.

Section 495.204(c)(2) states that to the extent data are available, qualifying MA organizations must receive hospital incentive payments through their affiliated hospitals under the Medicare FFS EHR hospital incentive program, rather than through the MA EHR hospital incentive program. Under § 495.210(c), we proposed that qualifying MA organizations be required to attest within 60 days after the close of a calendar year whether each qualifying MA-affiliated eligible hospital is a meaningful EHR user. While the EHR incentive payments for Medicare FFS and MA-affiliated hospitals are treated the same as all Medicare-certified MA affiliated hospitals they will demonstrate clinical quality measures through the continued reporting of HEDIS data. This means that § 495.210(c) generally applies to a MA-affiliated hospital that is not Medicare certified, and such a type of hospitals does not exist currently. We do not expect there to be any MA-affiliated hospitals that will not be covered under the Medicare FFS EHR hospital incentive program because section 1852(a)(1)(A) of the Act requires MA organizations to provide Part A inpatient services solely through providers that meet applicable requirements of the Medicare program. We have already addressed the attestation burden on hospitals, including MA-affiliated hospitals under § 495.10(b)(2)(i)(ii) and through our existing PRA package related to HEDIS reporting by MA organizations—OMB control number 0938–NEW.

F. ICRs Regarding Establishing Patient Volume (§ 495.306)

This section of the final rule contains patient volume requirements, and requires EPs and certain hospitals to attest to meeting such requirement using representative periods in order to qualify for a Medicaid EHR incentive. The minimum patient volume requirements are as follows: 30 percent Medicaid patient volume for most EPs, 20 percent Medicaid patient volume for pediatricians, 30 percent needy individual patient volume for EPs practicing predominantly in an FQHC or RHC, and 10 percent Medicaid patient volume for acute-care hospitals. The burden associated with the requirements in this section is the time and effort necessary to submit the information to CMS. In the proposed rule, in each instance, we estimated it would take no longer than 0.5 hours to submit the necessary information to CMS. We estimated that 119,000 entities would submit the required information to meet 30 percent (or 20 percent pediatrician) requirements for most EPs. We estimated the total annual burden to be 59,500 hours, with total labor cost amounting to $4,720,135 (assuming that physicians (rather than staff assistants) establish patient volume ($79.33 mean hourly rate for physicians based on May 2008 Bureau of Labor Statistics).

For hospitals to attest to patient volume, we estimated that 3,631 entities would submit required information, and estimated a total burden of 1,815.50 hours (3,631 entities × .5 hours). The total labor cost associated with this requirement is $25,617. This cost burden was based on a secretary reporting patient volume on behalf of the acute care hospital at $14.11 (mean hourly rate for secretaries based on May 2008 Bureau of Labor Statistics).

We received no comments on this section; however, since we have revised our definition of hospital-based EP, the burden is revised to account for the additional number of Medicaid EPs that could now be eligible to receive Medicaid incentive payments. We currently estimate that there are an additional Medicare/Medicaid 75,700 EPs that could be eligible for an incentive payment because of the new definition of hospital-based EP. We believe there are 553,200 Medicare EPs of which 86 percent are non-hospital based or 477,500. We believe 20 percent or 95,500 will meet patient volume requirements, and therefore, potentially qualify for Medicaid EHR incentive payments. Additionally, there are 44,100 Medicaid-only EPs (nurse practitioners, certified nurse-midwives, dentists, and physician assistants) that we believe will meet patient volume. Specifically, we believe that 139,600 EPs (95,500 + 44,100) could be reporting patient volume information. Thus, the updated annual burden associated with the requirements in § 495.306 at 0.5 hours for EPs is 69,800.

The total labor cost associated with the requirement is (69,800 × 79.33) $5,537,234. The total labor cost associated with each requirement is $5,537,234.

For hospitals reporting patient volume, we have updated the burden to account for the additional CAHs that meet the definition of acute care hospital. Specifically, there are 3,620 acute care hospitals, 11 cancer hospitals, and 1,302 CAHs that must report 10 percent Medicaid patient volume, or 4,933 entities. The updated annual burden associated with the requirement, at 0.5 hours is 2,466.5 (4,933 × .05). The total labor cost is $34,803.30.

G. ICRs Regarding Process for Payments (§ 495.312)

Section 495.312(b) states that in order to receive a Medicaid EHR incentive payment, a provider must report all necessary data (including data required by subpart A of the regulations, such as meaningful use data) within the EHR reporting period. We believe the information collections associated with this requirement are discussed in the relevant sections discussing each particular requirement that would necessitate data reporting (for example, the burden for demonstrating meaningful use is discussed in the information collection section on meaningful use). Therefore, we have not calculated a separate information collection burden for this requirement.

H. ICRs Regarding Activities Required To Receive an Incentive Payment (§ 495.314)

Section 495.314(a)(1) states that in the first payment year, to receive an incentive payment, the Medicaid EP or eligible hospital must meet one of the following criteria. The Medicaid EP or eligible hospital must demonstrate that during the EHR reporting period for a payment year, it has adopted, implemented, or upgraded certified EHR technology, as defined in § 495.302; or, the Medicaid EP or eligible hospital must demonstrate that during the EHR reporting period for a payment year it is a meaningful user of certified EHR technology as defined in § 495.4.

The burden associated with the requirements in proposed § 495.314(a)(1) is the time and effort necessary for a Medicaid EP or eligible hospital to demonstrate that it meets one of the criteria in § 495.314(a)(1)(i) through (ii). We believe we already accounted for this burden in the earlier discussion of the burden associated with § 495.8.

Section 495.314(a)(2) states that a provider may notify the State of its nonbinding intention to participate in

the incentives program prior to having fulfilled all of the eligibility criteria. This requirement constitutes a third-party disclosure. The burden associated with this requirement is the time and effort necessary for a provider to send notification to the State. We estimated that this burden will be the same burden associated with § 495.10 since the information necessary to notify the State of the providers non-binding intention to participate in the program could be the same information as submitted by those providers that have committed to participating in the program, that is, the National Provider Identifier, the tax identification number, etc.

Section 495.314(b)(1) states that in the second, third, fourth, fifth, and sixth payment years, to receive an incentive payment, the Medicaid EP or eligible hospital must demonstrate that during the EHR reporting period for the applicable payment year, it is a meaningful user of certified EHR technology, as defined in § 495.4. The burden associated with this requirement is the time and effort necessary for a Medicaid EP or eligible hospital to demonstrate that it is a meaningful user of certified EHR technology. We discussed the burden associated with this requirement in our discussion of the burden associated with § 495.6 and 495.8.

We did not receive any comments on the information collection burdens we estimated for the proposed rule.

I. ICRs Regarding State Monitoring and Reporting Regarding Activities Required To Receive an Incentive Payment (§ 495.316)

Section 495.316(a) requires States to be responsible for tracking and verifying the activities necessary for a Medicaid EP or eligible hospital to receive an incentive payment for each payment year, as described in § 495.314. Burden is calculated for each State's process for the administration of the Medicaid incentive payments, including tracking of attestations and oversight, and the process for approving, processing, and making timely payments.

For the proposed rule, we estimated that it would take 5 hours per State to accomplish this. The estimated annual burden for States associated with the aforementioned submission requirements is 280 hours (56 States-Territories × 5.0 hours/State-Territory). The cost burden was estimated based on an employee contracting with the State Agency. The burden associated with § 495.316 is already in the OMB approval process. We announced the information collection in a **Federal Register** notice that published on September 11, 2009 (74 FR 467330).

Comment: Some commenters asked CMS to clarify if States are responsible for collecting the MU measure data or if providers will report data directly to CMS. If the collection and reporting of MU data are States' responsibility, this would create tremendous burden on States. The commenters also asked CMS to clarify if States are responsible for validating attestations by eligible providers.

Response: For EPs and some hospitals, States are responsible for collecting the MU measure data; for hospitals that are eligible for both the Medicare and Medicaid incentives, hospitals that meet the Medicare MU objectives are deemed to have met MU for Medicaid; thus, since hospitals are required to report MU data to CMS for the Medicare EHR incentives program, these hospitals do not, in addition, have to report MU data to States. States are required to submit a State Medicaid HIT plan to CMS for review and approval outlining their methodology for collecting MU measure data and other required information outlined in this final rule. States are also responsible for validating attestations by providers. We do not believe collecting data or validating attestations is a tremendous burden on States as noted by our estimates. States can receive 90 percent FFP for administering the incentive payments to providers and for conducting adequate monitoring and oversight. In addition, it should be noted that States voluntarily participate in the Medicaid EHR incentive program.

J. ICRs Regarding State Responsibilities for Receiving FFP (§ 495.318)

Section 495.318 states that in order to be provided FFP under section 1903(a)(3)(F) of the Act, a State must demonstrate to the satisfaction of the Department, that the State is conducting the activities listed at § 495.318(a) through (c). This burden is the same as that listed above in the burden discussion for § 495.316.

K. ICRs Regarding Prior Approval Conditions (§ 495.324)

Section 495.324(a) requires a State to obtain prior written approval from the Department as specified in paragraph (b) of this section, when the State plans to initiate planning and implementation activities in support of Medicaid provider incentive payments encouraging the adoption and use of certified EHR technology with proposed Federal financial participation (FFP). Specifically, § 495.324(b) states that to receive 90 percent match, each State must receive prior approval for all of the requirements listed in § 495.324(b)(1) through (3).

Section 495.324(c) requires a State to obtain prior written approval from the Department of its justification for a sole source acquisition, when it plans to acquire non-competitively from a nongovernmental source HIT equipment or services, with proposed FFP under subpart D of Part 495 in the regulations, if the total State and Federal acquisition cost is more than $100,000. Burden must be calculated for State Medicaid Agencies to submit the planning and implementation documents and the SMHP to CMS. This burden is the same as that listed above in the burden discussion for § 495.316.

L. ICRs Regarding Termination of Federal Financial Participation (FFP) for Failure To Provide Access to Information (§ 495.330)

Section 495.330(a) states that the Department can terminate FFP at any time if the Medicaid agency fails to provide State and Federal representatives with full access to records relating to HIT planning and implementation efforts, and the systems used to interoperate with electronic HIT, including on-site inspection. Section 495.330(b) states that the Department may request such access at any time to determine whether the conditions in this subpart are being met. The burden associated with the requirements in this section is the time and effort necessary to make the information available to the Department upon request so it can monitor compliance. The Department estimated that it will make 1 request per State/Territory per year for information and that it will take each State 5 hours to compile and furnish the information. For States to collect and submit the information required, we estimated it would take 5 hours per State. The estimated annual burden for States associated with the aforementioned submission requirements is 280 hours (56 States-Territories × 5.0 hours/State-Territory).

The annual cost burden for a State employee to provide the above information is $9,904 (280 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)). We believe that a secretary may compile State information and provide the information to the Department. In that case the annual cost burden for the secretary to provide this information is $3,951 (280 hours × $14.11 (mean hourly rate for secretaries based on the May 2008 Bureau of Labor Statistics)).

M. ICRs Regarding State Medicaid Agency and Medicaid EP and Hospital Activities (§ 495.332 Through § 495.344)

The burden associated with this section is the time and effort associated with completing the single provider election repository and each State's process for the administration of the Medicaid incentive payments, including tracking of attestations and oversight; the submission of the State Medicaid HIT Plan and the additional planning and implementation documents; enrollment or reenrollment of providers, and collection and submission of the data for providers to demonstrate that they have adopted, implemented, or upgraded certified EHR technology or that they are meaningful users of such technology. We believe much of the burden associated with these requirements has already been accounted for in our discussion of the burden for § 495.316.

N. ICRs Regarding Access to Systems and Records (§ 495.346)

Section 495.346 states that the State agency must allow the Department access to all records and systems operated by the State in support of this program, including cost records associated with approved administrative funding and incentive payments to Medicaid providers. State records related to contractors employed for the purpose of assisting with implementation or oversight activities or providing assistance, at such intervals as are deemed necessary by the Department to determine whether the conditions for approval are being met and to determine the efficiency, economy, and effectiveness of the program.

The Department believes that the burden associated with maintaining the records is exempt under 5 CFR 1320.3(b)(2) as this burden is part of a usual and customary business practice; the time, effort, and financial resources necessary to comply with a collection of information that would be incurred by persons in the normal course of their activities (for example, in compiling and maintaining business records) will be excluded from the "burden" if the agency demonstrates that the reporting, recordkeeping, or disclosure activities needed to comply are usual and customary.

However, there is burden associated with making the information available to the Department upon request. This burden is described in the burden discussion for § 495.330.

O. ICRs Regarding Procurement Standards (§ 495.348)

Section 495.348(c) states that a grantee must maintain written standards of conduct governing the performance of its employees engaged in the award and administration of contracts. Although most States may already have these written standards of conduct, we have estimated the burden associated with this requirement as the time and effort necessary for a grantee to develop and maintain written standards of conduct. We estimate it will take each of the 56 grantees 0.5 hours to develop and maintain standards of conduct. The total estimated annual burden is 28 hours (56 grantees × 0.5 hours). The annual cost burden for a grantee to develop and maintain standards of conduct is $990 (28 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)).

Section 495.348(e) requires that all grantees establish written procurement procedures. At a minimum, the standards must provide for the information listed in § 495.348(e)(1) through (13). The burden associated with this requirement is the time and effort necessary for a grantee to develop and maintain written procurement procedures. Although most States probably have these procedures already, we estimate that it will take each of the 56 grantees 0.5 hours to develop and maintain written procurement procedures. The total estimated annual burden is 28 hours (56 grantees × 0.5 hours). The annual cost burden for a grantee to develop and maintain written procurement procedures is $990 (28 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)).

Section 495.348(f) imposes recordkeeping requirements. This section states that a system for contract administration must be maintained to ensure contractor performance with the terms, conditions and specifications of the contract and to ensure adequate and timely follow up on all purchases. The burden associated with this requirement is the time and effort necessary to develop and maintain a system for contract administration. We estimate that it will take each of the 56 grantees 5 hours to develop and maintain a system for contract administration. The total estimated annual burden is 280 hours (56 grantees × 5 hours). The annual cost burden for a grantee to develop and maintain a system for contract administration is $9,904 (280 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)).

P. ICRs Regarding State Medicaid Agency Attestations (§ 495.350)

Section 495.350 requires States to provide assurances to the Department that amounts received with respect to sums expended that are attributable to payments to a Medicaid provider for the adoption of EHR are paid directly to such provider, or to an employer or facility to which such provider has assigned payments, without any deduction or rebate. The burden associated with this requirement is the time and effort necessary for a State to verify that the sums expended are attributable to payments to a Medicaid provider for the adoption of EHR are paid directly to such provider, or to an employer or facility to which such provider has assigned payments, without any deduction or rebate. Additionally, there is burden associated with submitting an attestation to the Department to that effect. The estimated burden associated with these requirements is 0.5 hours to verify the information and 0.5 hours to submit the attestation to the Department, for a total of 1 hour. The estimated annual burden for States associated with the aforementioned submission requirements is 56 hours (56 States-Territories × 1 hour State-Territory). The annual cost burden for a State employee to provide the above information is $1,981 (56 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)). We believe that that a secretary may compile State information and provide the information to the Department. In that case the annual cost burden for the secretary to provide this information is $790 (56 hours × $14.11 (mean hourly rate for secretaries based on the May 2008 Bureau of Labor Statistics)).

Q. ICRs Regarding Reporting Requirements (§ 495.352)

Section 495.352 requires each State to submit to the Department on a quarterly basis a progress report documenting specific implementation and oversight activities performed during the quarter, including progress in implementing the State's approved Medicaid HIT plan. The burden associated with this requirement is the time and effort necessary for a State to draft and submit quarterly progress reports to the Department. For States to collect and submit the information required, we estimate it will take 5 hours per State. The estimated annual burden for States associated with the aforementioned submission requirements is 280 hours

(56 States-Territories × 5 hours/State-Territory).

The annual cost burden for a State employee to provide the above information is $9,904 (280 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)). We believe that a secretary may compile State information and provide the information to the Department. In that case the annual cost burden for the secretary to provide this information is $3,951 (280 hours × $14.11 (mean hourly rate for secretaries based on the May 2008 Bureau of Labor Statistics)).

R. ICRs Regarding Retroactive Approval of FFP With an Effective Date of February 18, 2009 (§ 495.362)

Section 495.362 states that for administrative activities performed by a State, without obtaining prior approval, which are in support of planning for incentive payments to providers, a State may request consideration of FFP by recorded request in a HIT planning advance planning document or implementation advance planning document update. While this requirement is subject to the PRA, we believe the burden is already covered in the discussion of proposed § 495.332 through § 495.344.

S. ICRs Regarding Financial Oversight and Monitoring Expenditures (§ 495.366)

Section 495.366(a)(2) requires a State to have a process in place to report actual expenditures for the Medicaid EHR incentive program using the Medicaid Budget Expenditure System. Since States already have to report Medicaid expenditures to the Medicaid Budget and Expenditure System, there is no need for States to develop and implement a reporting process. However, States will need to estimate and report the expenditures related to the provider incentive payments and the cost of the administration of the incentive payments. The estimated annual burden for States associated with the aforementioned requirements is 280 hours (56 States-Territories × 5 hours State-Territory).

The annual cost burden for a State employee to provide the above information is $9,904 (280 hours × $35.37 (mean hourly rate for a management analyst based on the May 2008 Bureau of Labor Statistics)). We believe that a secretary may compile State information and provide the information to the Department. In that case the annual cost burden for the secretary to provide this information is $3,951 (280 hours × $14.11 (mean hourly rate for secretaries based on the May 2008 Bureau of Labor Statistics)).

Section 495.366(a)(3) requires a State to have an automated payment and information retrieval mechanized system, (Medicaid Management Information System) to make EHR payment incentives, to ensure Medicaid provider eligibility, to ensure the accuracy of payment incentives, and to identify potential improper payments. Since States already have an automated payment and information retrieval system, there is no need to estimate this burden.

Section 495.366(b) lists the information collection requirements associated with provider eligibility as a basis for making payment. States must, subject to § 495.332, collect and verify information on Medicaid providers. This burden is the same as that listed above in the discussion of § 495.316.

Section § 495.366(c)(1) states that subject to § 495.332, the State must annually collect and verify information regarding the efforts to adopt, implement, or upgrade certified EHR technology and the meaningful use of said technology before making any payments to providers. This burden has already been discussed in our burden explanation for § 495.8.

Section 495.366(d)(1) states that subject to paragraph § 495.332, the State must assure that State expenditures are claimed in accordance with, including but not limited to, applicable Federal laws, regulations and policy guidance. Section 495.366(d)(2) specifies that subject to § 495.332, the State must have a process in place to assure that expenditures for administering the Medicaid EHR incentive payment program will not be claimed at amounts higher than 90 percent of the cost of such administration. Section 495.366(d)(3) states that subject to § 495.332, the State must have a process in place to assure that expenditures for payment of Medicaid EHR incentive payments will not be claimed at amounts higher than 100 percent of the cost of such payments to Medicaid providers. This burden is the same as that listed above in the discussion of § 495.316.

Section 495.366(e) discusses the information collection requirements associated with improper Medicaid electronic health record payment incentives. The burden associated with the requirements listed in proposed § 495.366(e)(1) through (7) is the time and effort necessary to develop processes to provide the necessary assurances discussed in this section. This burden is the same as that listed above in the discussion of § 495.316.

T. ICRs Regarding Appeals Process for a Medicaid Provider Receiving Electronic Health Record Incentive Payments (§ 495.370)

Section 495.370(a) requires states to have a process in place consistent with the requirements established in § 447.253(e) for a provider or entity to appeal incentive payments, incentive payment amounts, provider eligibility determinations, and the demonstration of adopting, implementing, or upgrading and meaningful use of certified EHR technology. This burden is the same as that listed above in the discussion of § 495.316.

We continue to believe that these numbers are subject to a substantial amount of uncertainty and actual experience may be significantly different. The range of possible experience is greater than under most other rules for the following reason; specifically, this rule provides the option for States to participate in the Medicaid certified electronic health record technology incentive payment program. To the extent that States participate more or less than assumed here (that is, the number of States, EPs and hospitals) the burden associated may be greater than or less than estimated.

U. General Comments Regarding the Information Collection Requirements

Comment: Some commenters recommended that EPs and eligible hospitals should start tracking time and resources estimates on their overall cost for complying with all the required data collection to achieve meaningful use during the reporting period. They believed the information is beneficial for CMS in developing and assessing future meaningful use objectives and measures.

Response: We welcome provider input on the required resources to comply with the meaningful use requirements. We believe the information would help us to fine-tune burden estimates for future rulemaking for subsequent stages of meaningful use demonstration.

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TABLE 21: Burden and Cost Estimates Associated with Information Collection Requirements

Reg Section	OMB Control No.	Respondents	Responses	Burden per Response (in hours)	Total Annual Burden (in hours)	Hourly Labor Cost of Reporting (in $)	Total Cost of Reporting (in $)	Total Capital/Maintenance Costs (in $)	Total Costs (in $)
§495.8 (a)(1)- EHR Technology Used, core Set Objectives/Measures & Quality Measures (EPs) (2011)	0938-New	521,600	521,600	9.367	4,885,827	79.33	387,592,672	0	387,592,672
§495.8 (a)(1)- menu Set Objectives/Measures high (EPs) (2011)	0938-New	521,600	521,600	2.666	1,390,586	79.33	110,315,156	21,700,000,000	21,810,315,156
§495.8 (a)(1)- menu Set Objectives/Measures low (EPs) (2011)	0938-New	521,600	521,600	0.700	365,120	79.33	28,964,970	21,700,000,000	21,728,964,970
§495.8 (a)(1)- menu Set Objectives/Measures average (EPs) (2011)	0938-New	521,600	521,600	1.683	877,853	79.33	69,640,063	21,700,000,000	21,769,640,063
§495.8(a)(2) - EHR Technology Used & core Set Objectives/Measures (EPs) (2012)	0938-New	527,254	527,254	8.867	4,675,161	79.33	370,880,539	0	370,880,539
§495.8 (a)(2)- menu Set Objectives/ Measures high (EPs) (2012)	0938-New	527,254	527,254	2.666	1,405,659	79.33	111,510,941	4,500,000,000	4,611,510,941
§495.8 (a)(2)- menu Set Objectives/ Measures low (EPs) (2012)	0938-New	527,254	527,254	0.700	369,078	79.33	29,278,942	4,500,000,000	4,529,278,942
§495.8 (a)(2)- menu Set Objectives/ Measures average (EPs) (2012)	0938-New	527,254	527,254	1.683	887,368	79.33	70,394,942	4,500,000,000	4,570,394,942
§495.8 (a)(2)- Ambulatory Quality Measures (EPs) (2012)	0938-New	527,254	527,254	0.500	263,627	14.81	3,904,316	0	3,904,316
§495.8 (b)(1)-- EHR Technology Used, core Set Objectives/Measures & Quality Measures (hospitals/CAHs) (2011)	0938-New	5,011	5,011	9.200	46,101	59.98	2,765,150	0	2,765,150

Reg Section	OMB Control No.	Respondents	Responses	Burden per Response (in hours)	Total Annual Burden (in hours)	Hourly Labor Cost of Reporting (in $)	Total Cost of Reporting (in $)	Total Capital/Maintenance Costs (in $)	Total Costs (in $)
§495.8(b)(1) - menu Set Objectives/ Measures low (hospitals/CAHs) (2011)	0938-New	5,011	5,011	0.700	3,508	59.98	210,392	20,600,000,000	20,600,210,392
§495.8(b)(1) - menu Set Objectives/ Measures high (hospitals/CAHs) (2011)	0938-New	5,011	5,011	3.500	17,539	59.98	1,051,959	20,600,000,000	20,601,051,959
§495.8(b)(1) - menu Set Objectives/ Measures average (hospitals/CAHs) (2011)	0938-New	5,011	5,011	2.100	10,523	59.98	631,176	20,600,000,000	20,600,631,176
§495.8 (b)(2)-- EHR Technology Used & core Set Objectives/Measures (hospitals/CAHs) (2012)	0938-New	5,011	5,011	8.700	43,596	59.98	2,614,870	0	2,614,870
§495.8 (b)(2)- menu Set Objectives/ Measures low (hospitals/CAHs) (2012)	0938-New	5,011	5,011	0.700	3,508	59.98	210,392	5,000,000,000	5,000,210,392
§495.8 (b)(2)- menu Set Objectives/ Measures high (hospitals/CAHs) (2012)	0938-New	5,011	5,011	3.500	17,539	59.98	1,051,959	5,000,000,000	5,001,051,959
§495.8 (b)(2)- menu Set Objectives/ Measures average (hospitals/CAHs) (2012)	0938-New	5,011	5,011	2.100	10,523	59.98	631,176	5,000,000,000	5,000,631,176
§495.8 (b)(2)- Hospital Quality Measures (hospitals/CAHs) (2012)	0938-New	5,011	5,011	0.500	2,506	14.81	37,106	0	37,106
§495.10(a)-(c) -- (EPs) (2011) low	0938-New	521,600	521,600	0.500	260,800	14.81	3,862,448	0	3,862,448
§495.10(a)-(c) -- (EPs) (2011) high	0938-New	521,600	521,600	0.500	260,800	79.33	20,689,264	0	20,689,264
§495.10(a)-(c) -- (EPs) (2011) average		521,600	521,600	0.500	260,800	47	12,275,856	0	12,275,856
§495.10(d) - (EPs) (2012) low	0938-New	57,998	57,998	0.500	28,999	14.81	429,475	0	429,475
§495.10(d) - (EPs) (2012) high	0938-New	57,998	57,998	0.500	28,999	79.33	2,300,491	0	2,300,491
§495.10(d) - (EPs) (2012) average		57,998	57,998	0.500	28,999	47	1,364,983	0	1,364,983

Reg Section	OMB Control No.	Respondents	Responses	Burden per Response (in hours)	Total Annual Burden (in hours)	Hourly Labor Cost of Reporting (in $)	Total Cost of Reporting (in $)	Total Capital/Maintenance Costs (in $)	Total Costs (in $)
§495.10(e)(1) - (EPs) (2011) low	0938-New	95,500	95,500	0.500	47,750	14.81	707,178	0	707,178
§495.10(e)(1) - (EPs) (2011) high	0938-New	95,500	95,500	0.500	47,750	79.33	3,788,008	0	3,788,008
§495.10(e)(1) - (EPs) (2011) average		95,500	95,500	0.500	47,750	47	2,247,593	0	2,247,593
§495.10(e)(2) - (EPs) (2012) low	0938-New	96,500	96,500	0.500	48,250	14.81	714,583	0	714,583
§495.10(e)(2) - (EPs) (2012) high	0938-New	96,500	96,500	0.500	48,250	79.33	3,827,673	0	3,827,673
§495.10(e)(2) - (EPs) (2012) average		96,500	96,500	0.500	48,250	47	2,271,128	0	2,271,128
§495.10(a) (b) (hospital) (2011)	0938-New	5,011	5,011	0.500	2,506	14.81	37,106	0	37,106
§495.10(d) - (hospital) (2012)	0938-New	401	401	0.500	201	14.81	2,969	0	2,969
§495.202(b)(2) (2012) EPs-preliminary ID	0938-New	12	12	0.500	6	59.98	360	0	360
§495.202(b)(2) (2012) MA-affiliated hospitals-preliminary ID	0938-New	12	12	0.250	3	15.44	46	0	46
§495.202(b)(2) (2012) EPs-final ID	0938-New	12	12	0.500	6	59.98	360	0	360
§495.202(b)(2) (2012) MA-affiliated hospitals-final ID	0938-New	12	12	0.250	3	15.44	46	0	46
§495.204(b)(2) (2012) Revenue reporting	0938-New	12	12	40.000	480	15.44	7,411	0	7,411
§495.204(b)(4) (2012) EPs-method	0938-New	2	2	1.500	3	31.65	95	0	95
§495.204(b)(5) or (b)(6)(2012) EPs-salary	0938-New	12	12	58.300	700	15.44	10,802	0	10,802
§495.210(b) (2012) EPs-attestation	0938-New	12	12	40.000	480	59.98	28,790	0	28,790
§495.306(a)(1)(i)	0938-New	139,600	139,600	0.500	69,800	79.33	5,537,234	0	5,537,234
§495.306(a)(1)(ii)(A)	0938-New	139,600	139,600	0.500	69,800	79.33	5,537,234	0	5,537,234
§495.306(a)(1)(ii)(B)	0938-New	139,600	139,600	0.500	69,800	79.33	5,537,234	0	5,537,234

Reg Section	OMB Control No.	Respondents	Responses	Burden per Response (in hours)	Total Annual Burden (in hours)	Hourly Labor Cost of Reporting (in $)	Total Cost of Reporting (in $)	Total Capital/Maintenance Costs (in $)	Total Costs (in $)
§495.306(a)(2)	0938-New	4,933	4,933	0.500	2,467	14.11	34,802	0	34,802
§495.316	0938-New	56	56	5.000	280	100	28,000	0	28,000
§495.330(a) - high	0938-New	56	56	5.000	280	35.37	9,904	0	9,904
§495.330(a) - low	0938-New	56	56	5.000	280	14.11	3,951	0	3,951
§495.330(a) - average		56	56	5.000	280	24.74	6,927	0	6,927
§495.348(c)	0938-New	28	56	0.500	28	35.37	990	0	990
§495.348(e)	0938-New	28	56	0.500	28	35.37	990	0	990
§495.348(f)	0938-New	28	56	5.000	280	35.37	9,904	0	9,904
§495.350--high	0938-New	56	56	1.000	56	35.37	1,981	0	1,981
§495.350--low	0938-New	56	56	1.000	56	14.11	790	0	790
§495.350--average		56	56	1.000	56	24.74	1,385	0	1,385
§495.352--high	0938-New	56	56	5.000	280	35.37	9,904	0	9,904
§495.352--low	0938-New	56	56	5.000	280	14.11	3,951	0	3,951
§495.352--average		56	56	5.000	280	24.74	6,927	0	6,927
§495.366--high	0938-New	56	56	5.000	280	35.37	9,904	0	9,904
§495.366--low	0938-New	56	56	5.000	280	14.11	3,951	0	3,951
§495.366--average		56	56	5.000	280	24.74	6,927	0	6,927
Total 2011*					6,344,458		481,944,348		42,781,944,348
Total 2012*					6,175,290		466,366,443		9,966,366,443

Note: Where there are low, high, and average estimates listed for the provisions, only the average figures are used for the purpose of burden calculation

* Burden not otherwise designated by year, that is, 2011, 2012, or 2011-2012, is considered to be annual burden and is included in the sum total burden for both 2011 and 2012.

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We will accept comments on the aforementioned information collection requirements for 60 days from the date of display for this final rule. At the conclusion of the 60-day comment period, we will publish an additional notice announcing the submission of the information collection request associated with this final rule for OMB approval. At that time, the public will have an additional 30 days to submit public comments to OMB for consideration.

To obtain copies of the supporting statement associated with the information collection requirements contained herein, access CMS' Web site at *http://www.cms.hhs.gov/PaperworkReductionActof1995*, or E-mail your request, including your address, phone number, OMB number, and CMS document identifier, to Paperwork@cms.hhs.gov, or call the Reports Clearance Office on (410) 786–1326.

In commenting on the information collection requirements, please reference the information collection request identifier (CMS–10336). To be assured consideration, comments and recommendations must be submitted in one of the following ways by September 13, 2010:

1. *Electronically.* You may submit your comments electronically to *http://www.regulations.gov.* Follow the instructions for "Comment or Submission" or "More Search Options" to find the information collection document(s) accepting comments.

2. *By regular mail.* You may mail written comments to the following address: CMS, Office of Strategic Operations and Regulatory Affairs, Division of Regulations Development, *Attention:* Document Identifier/OMB Control Number, Room C4–26–05, 7500 Security Boulevard, Baltimore, Maryland 21244–1850.

IV. Regulatory Impact Analysis

A. Overall Impact

We have examined the final impacts of this rule as required by Executive Order 12866, the Regulatory Flexibility Act, section 1102(b) of the Social Security Act regarding rural hospital impacts, the Unfunded Mandates Reform Act, Executive Order 13132 on Federalism, and the Congressional Review Act.

Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for rules with economically significant effects ($100 million or more in any 1 year). This final rule is anticipated to have an annual effect on the economy of $100 million or more, making it an economically significant rule under the Executive Order and a major rule under the Congressional Review Act. Accordingly, we have prepared a RIA that to the best of our ability presents the costs and benefits of the final rule.

This final rule is one of three coordinated rulemakings undertaken to implement the goals and objectives of the HITECH Act related to the adoption and meaningful use of certified EHR technology. The other two are HHS's interim final rule establishing certification criteria, standards, and implementation specifications for certification of EHR systems, and HHS' final rule on EHR certification programs. Each rule assessed the direct economic effects of its provisions. This final rule on Medicare and Medicaid EHR Incentive Programs addresses the impacts related to the actions taken by EPs or eligible hospitals, or CAHs to demonstrate meaningful use of certified EHR technology, including purchasing or developing in-house certified EHR technology or EHR technology modules.

A number of factors will affect the adoption of EHR systems and demonstration of meaningful use. Many of these are addressed in this final analysis, but also the final provisions of the other rules. Readers should understand that these forecasts are also subject to substantial uncertainty since demonstration of meaningful use will depend not only on the standards and requirements for FYs 2011 and 2012 for eligible hospitals and CYs 2011 and 2012 for EPs, but on future rulemakings issued by the HHS.

The HITECH Act provides Medicare and Medicaid incentive payments for the meaningful use of certified EHR technology. Additionally, the Medicaid program also provides incentives for the adoption, implementation, and upgrade of certified EHR technology. Payment adjustments are incorporated into the Medicare program for providers unable to demonstrate meaningful use. The absolute and relative strength of these is unclear. For example, a provider with relatively small Medicare billings will be less disadvantaged by payment adjustments than one with relatively large Medicare billings. Another uncertainty arises because there are likely to be "bandwagon" effects as the number of providers using EHRs rises, thereby inducing more participation in the incentives program, as well as greater adoption by entities (for example, clinical laboratories) that are not eligible for incentives or subject to penalties, but do business with EHR adopters. It is impossible to predict exactly if and when such effects may take hold.

One legislative uncertainty arises because under current law, physicians are scheduled for payment reductions under the sustainable growth rate (SGR) formula for determining Medicare payments. Under the current law, physician payments were reduced by 23 percent beginning December 1, 2010, and are scheduled for further reductions in CY 2011. Such reductions could cause major changes in physician behavior, enrollee care, and other Medicare provider payments, but the specific nature of these changes is exceptionally uncertain. Under a current law scenario, the EHR incentives or payment adjustments would exert only a minor influence on physician behavior relative to these very large payment reductions. However, the Congress has legislatively avoided physician payment reductions in each of the past 7 years. Behavioral changes resulting from these scheduled Medicare physician payment reductions are not included in our estimate and likewise we do not assume any additional behavioral changes from EHR incentive payments for Medicare physicians.

All of these factors taken together make it impossible to predict with precision the timing or rates of adoption and ultimately meaningful use. Therefore, we show two scenarios, which illustrate how different scenarios would impact overall costs. Our "high" scenario of meaningful use demonstration assumes that roughly a decade from now, nearly 100 percent of hospitals and 70 percent of EPs will be "meaningful users." This estimate is based on the substantial economic incentives created by the combined direct and indirect factors affecting providers. We appreciate that in the real world nothing is ever 100 percent, and can even identify factors that would certainly lead providers to forego implementing an EHR. For example, a physician nearing retirement with a low Medicare caseload might well decide to accept the relatively low adverse consequences of declining to demonstrate meaningful use of certified EHR technology. Alternatively, EPs, eligible hospitals and CAHs may choose not to adopt and meaningfully use EHRs if the total costs of purchasing certified EHRs and the total costs of complying with this rule are higher than the value

of the total EHR incentive payments (and adjustments, if applicable). However, we have no reliable basis for estimating the rate of such "holdouts." To emphasize the uncertainties involved, we have also created a "low" scenario estimate for the demonstration of meaningful use each year, which assumes less robust adoption and meaningful use. Our "low" scenario of meaningful use demonstration assumes that roughly a decade from now, nearly 95.6 percent of hospitals and 36 percent of EPs will be "meaningful users."

Both the high and low scenario estimates are based on current law, which includes a scheduled physician payment cut of 23 percent on December 1, 2010. Such a reduction could cause major changes in physician behavior, enrollee care, and other Medicare provider payments, but the specific nature of these changes is exceptionally uncertain. In our estimates, we did not assume changes in physician behavior as a result of these payment cuts, as this reflects the standard practice used in forecasts of government spending (including effects on the private sector) by the Boards of Trustees for the Hospital Insurance and Supplementary Medical Insurance Trust Funds, and the Office of the Actuary in HHS.

Since this RIA was published in the proposed rule, legislation has been enacted that increases the number of EPs that may be eligible to receive an incentive payment by changing the determination of hospital-based. A complete discussion of the issue, including comments and responses are available in section 2 of this rule stated. The determination of whether an EP is hospital-based will be based upon whether substantially all of the EP's services are furnished in places of service classified under place of service codes 21 (Inpatient Hospital) or 23 (Emergency Room, Hospital). Previously under the old definition, CMS estimated that 27 percent of EPs would meet the definition of hospital-based, however, now, under this final definition of hospital-based EPs, about 14 percent of Medicare EPs would be considered hospital-based and thus not eligible to receive any incentive payments.

There are many estimates of current EHR adoption and usage rates. There is one EHR function—e-prescribing—for which adoption and usage rates for both physicians and hospitals may exceed 50 percent. However, high estimates are misleading because they focus on particular elements, not on comprehensive systems that provide a full range of functions, similar in scope to those established in ONC's final rule that adopts standards, implementation specifications, and certification criteria for the technical requirements and capabilities that EHR systems will need to meet in order to be certified. Based on several peer-reviewed studies, only a small proportion of physicians and hospitals have invested in EHR technology that encompasses such a broad range of functions. For example, a study entitled "Electronic Health Records in Ambulatory Care—A National Survey of Physicians" (Catherine DesRoches et al., New England Journal of Medicine, July 3, 2008), found that in 2007 only "four percent of physicians reported having an extensive, fully functional electronic-records system, and 13 percent reported having a basic system." (Additional results from the same survey can be found at the Department's Health IT Adoption Initiative Web site at *http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&cached=true&objID=1152*.) Another study entitled "Use of Electronic Health Records in U.S. Hospitals" (Ashish Jha et al., New England Journal of Medicine, April 16, 2009) found that in 2007 "only 1.5 percent of U.S. hospitals have a comprehensive electronic-records system * * * and an additional 7.6 percent have a basic system." Computerized order entry (CPOE) for drugs was fully implemented in only 17 percent of hospitals.

Most physicians and hospitals have not yet invested in the hardware, software, testing and training to implement advanced EHRs for a number of reasons—lack of standards, lack of interoperability, limited physician acceptance, fear of maintenance costs, and lack of capital. Perhaps most importantly, adoption of EHR technology necessitates major changes in business processes and practices throughout a provider's office or facility. Business process reengineering on such a scale is not undertaken lightly. However, the availability of the HITECH Act incentives, grants for technical support, more consistent use of standards and specified certification criteria, and other factors addressed in this RIA are likely to increase the adoption of EHR technology very substantially over the next 10 years—perhaps approaching complete adoption for physicians, hospitals, and many other types of providers, despite, as those providers have commented, not being included in this final rule.

Overall, we expect spending under the EHR incentive program for transfer payments to Medicare and Medicaid providers over 10 years to be $9.7 billion under the low scenario, and $27.4 billion under the high scenario (these estimates include net payment adjustments for Medicare providers who do not achieve meaningful use in 2015 and beyond in the amount of $3.9 billion under the high scenario and $8.1 billion under the low scenario). We have also estimated "per entity" costs for EPs, eligible hospitals, and CAHs. We estimate also that adopting entities will achieve dollar savings at least equal to their total costs, and that there will be additional benefits to society. We remain persuaded after consideration of the public comments that implementation costs will be significant for each participating entity because providers who would like to qualify as meaningful users of EHRs will need to purchase certified EHR technology. We further acknowledge that certified EHRs may differ in many important respects from the types of EHRs noted in these comments and the functionalities they contain may differ. However, we still anticipate that the short-term costs to demonstrate meaningful use of certified EHR technology will be outweighed by the long-term benefits, including practice efficiencies and improvements in medical outcomes. Thus it remains that although both cost and benefit estimates are highly uncertain, the RIA that we have prepared to the best of our ability presents the costs and benefits of the final rulemaking.

B. Regulatory Flexibility Analysis

The Regulatory Flexibility Act requires agencies to prepare an Initial Regulatory Flexibility Analysis to describe and analyze the impact of the final rule on small entities unless the Secretary can certify that the regulation will not have a significant impact on a substantial number of small entities. In the healthcare sector, Small Business Administration size standards define a small entity as one with between $7 million and $34 million in annual revenues. For the purposes of the Regulatory Flexibility Act, essentially all non-profit organizations are considered small entities, regardless of size. Individuals and States are not included in the definition of a small entity. Since the vast majority of Medicare providers (well over 90 percent) are small entities within the Regulatory Flexibility Act's definitions, it is the normal practice of HHS simply to assume that all affected providers are "small" under the Regulatory Flexibility Act. In this case, most EPs, eligible hospitals, and CAHs are either non-profit or meet the SBA's size standard for small business. We also believe that the effects of the incentives program on many and probably most of these affected entities will be economically

significant. Accordingly, this RIA section, in conjunction with the remainder of the preamble, constitutes the required Initial Regulatory Flexibility Analysis. We believe that the adoption and meaningful use of EHRs will have an impact on virtually every EP and eligible hospital, as well as CAHs and some EPs and hospitals affiliated with MA organizations. While the program is voluntary, in the first 5 years it carries substantial positive incentives that will make it attractive to virtually all eligible entities. Furthermore, entities that do not demonstrate meaningful use of EHR technology will be subject to significant Medicare payment reductions after the fifth year. The anticipation of these Medicare payment adjustments will also motivate EPs, eligible hospitals, and CAHs to adopt and meaningfully use certified EHR technology.

For some EPs, CAHs and eligible hospitals the EHR technology that they have in place before the HITECH requirements will be able to be upgraded to meet the criteria for certified EHR technology as defined for this program. These costs may be minimal, involving no more than a software upgrade. "Home-grown" EHR systems that might exist may also require an upgrade to meet the HITECH certification requirements.

We believe that most EPs using EHR systems will require significant changes to achieve certification and that EPs, CAHs and eligible hospitals will have to make process changes to achieve meaningful use. Further, given what we know about the current low levels of EHR adoption we believe that the majority of EPs will need to purchase certified EHR technology, implement this new technology, and train their staff on its use. The costs for implementation and complying with the criteria of meaningful use could lead to higher operational expenses. However, we believe that the combination of payment incentives and long-term overall gains in efficiency will compensate for the initial expenditures.

1. Number of Small Entities

In total, we estimate that there are approximately 624,000 healthcare organizations (EPs, eligible hospitals, or CAHs that will be affected by the incentive program. These include hospitals and physician practices as well as doctors of medicine or osteopathy, dental surgery or dental medicine, podiatric medicine, optometry or a chiropractor. Additionally, eligible nonphysicians (such as certified nurse-midwives, etc.) will be eligible to receive the Medicaid incentive payments.

Of the 624,000 healthcare organizations we estimate will be affected by the incentive program, we estimate that 94.71 percent will be EPs, 0.8 percent will be hospitals, and 4.47 percent will be MAO physicians or hospitals. We further estimate that EPs will spend approximately $54,000 to purchase and implement a certified EHR and $10,000 annually for ongoing maintenance according to the CBO. In that paper, Evidence on the Costs and Benefits of Health Information Technology, May 2008, in attempting to estimate the total cost of implementing health IT systems in office-based medical practices, recognized the complicating factors of EHR types, available features and differences in characteristics of the practices that are adopting them. The CBO estimated a cost range of $25,000 to $45,000 per physician. For all eligible hospitals, the range is from $1 million to $100 million. Though reports vary widely, we anticipate that the average would be $5 million to achieve meaningful use. We estimate $1 million for maintenance, upgrades, and training each year. See the Costs of EHR adoption in section a under Background and Assumptions portion of this analysis for a discussion regarding the costs of adoption and variation by size and details on our estimates for the number of entities that are eligible for the incentive within each eligibility type category.

Comment: One commenter suggested that the Regulatory Flexibility Act analysis did not include an assessment of the cost to implement the rule at state and local health departments. State and local health departments do operate clinics and provide care to the public. Some state and local health departments would be considered small businesses under the Regulatory Flexibility Act and an assessment of the implementation costs for these entities would allow us to work together to identify possible funding sources and cost savings strategies.

Response: Under Medicaid, clinics such as rural health clinics or FQHCs are not eligible providers that can receive incentive payments. However, EPs within these clinics can receive incentive payments if they meet all other eligibility requirements. The Federal costs and payments associated with EHR implementation for EPs are captured on in Tables 32 and 33.

2. Alternatives Considered

This final rule implements new provisions of the Act for providing incentives for EPs, eligible hospitals, and CAHs that adopt and demonstrate meaningful use of certified EHR technology. HHS has no discretion to change the incentive payments or Medicare payment reductions specified in the statute for providers that adopt or fail to adopt EHR and achieve meaningful use of EHR technology. The only substantial alternatives within the discretion of the Department revolve around how best to meet the requirements of the HITECH Act through the definition of meaningful use for FY 2011 and beyond. Requirements that are too stringent could have the adverse effect of preventing many EPs, eligible hospitals, and CAHs from achieving meaningful use and thus preventing them from receiving an incentive payment. Our meaningful use requirements for 2011 are designed to encourage more widespread adoption of certified EHR technology and allow more EPs, eligible hospitals, and CAHs to qualify for incentives while they are also adjusting their practice patterns and training staff to operate the EHR technology in preparation for more stringent meaningful use requirements over time. We recognize that there may be incremental costs that result from requiring additional functionality over the base level defined in the HITECH Act. We note that with regard to reporting of clinical quality measures for purposes of demonstrating meaningful use, we initially considered requiring EPs, eligible hospitals, and CAHs to report quality measures electronically in the initial year of the program; however, ultimately we determined that many providers would not be able to comply with a requirement to report all quality measures at the beginning of the program. The alternative approach, consistent with the requirements of this final rule, is to require reporting of quality measures in phases. In 2011, there will be a requirement to report clinical quality measures through attestation with a numerator, denominator, and exclusions. Electronic clinical quality measure reporting will begin in FY 2012 for hospitals and CY 2012 for EPs. We expect that additional clinical quality measure reporting will be added in later years.

Under Medicaid, we considered numerous alternatives regarding how to demonstrate eligibility for the incentive payments as well as adoption and meaningful use of the certified EHR technology. These alternatives, including the time period for demonstrating adequate patient volume, and the requirements and methods for demonstrating meaningful use are

discussed in section II.D. of this final rule.

3. Conclusion

As discussed later in this analysis, we believe that there are many positive effects of adopting EHR on health care providers, quite apart from the incentive payments to be provided under this rule. While economically significant, we do not believe that the net effect on individual providers will be negative over time except in very rare cases. (The statute provides for hardship exemption in such cases.) Accordingly, we believe that the object of the Regulatory Flexibility Act to minimize burden on small entities are met by this rule as final.

Comment: Commenters cited the variation in the costs of EHR adoption across EP settings. For example, smaller practices believe their costs of EHR adoption to be higher per physician than larger counterparts. They believe they cannot realize the staff reductions and related cost savings from EHR adoption due to greater cross-functionality for their staff.

Response: We acknowledge the different experiences EPs have with EHR adoption and implementation. Two additional studies relating to the costs of adoption among small practices (Miller et al. (2005) "The Value Of Electronic Health Records In Solo Or Small Group Practices" Health Affairs 24(5): 1127–1137, and Zaroukian and Sierra (2006) "Benefiting from Ambulatory EHR Implementation: Solidarity, Six Sigma, and Willingness to Strive" The Journal of Healthcare Information Management 20(1): 53–60) estimate the cost per physician to be $44,000 per year with roughly $8,500 to $13,000 in ongoing maintenance. However, even among these studies there was still variation in experience. The per provider design of meaningful use incentive payments and orientation of other government health IT grant programs is to facilitate adoption and positive return on investment across health care settings. Thus we continue to hold that our cost estimates are reasonable estimations of provider experience while acknowledging that variations in experiences will be inevitable.

C. Small Rural Hospitals

Section 1102(b) of the Act requires us to prepare a RIA if a rule would have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 of the Regulatory Flexibility Act. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a metropolitan statistical area and has fewer than 100 beds. This final rule would affect the operations of a substantial number of small rural hospitals because they are required to adopt certified EHR technology by 2015, or face adjusted Medicare payments. As stated above, we have determined that this final rule would create a significant impact on a substantial number of small entities, and have prepared a Regulatory Flexibility Analysis as required by the Regulatory Flexibility Act and, for small rural hospitals, section 1102(b) of the Act. Furthermore, any impacts that would arise from the implementation of certified EHR technology in a rural eligible hospital would be positive, with respect to the streamlining of care and the ease of sharing information with other EPs to avoid delays, duplication, or errors.

Comment: Several commenters have disagreed with our assessment, noting that the unique circumstances of small rural hospitals will not lead to efficiency and lower costs as it might with urban hospitals, but would lead to increased costs related to loss of productivity among the staff for implementing and learning an EHR system, and in later years, Medicare payment adjustments because of the lack of broadband access in these areas among other reasons.

Response: Although we agree that small rural hospitals will have challenges inherent in their location, size and staffing complexity, we also acknowledge that smaller, more rural hospitals could experience added burden in achieving meaningful use. Supplemental funding to Regional Extension Centers to assist CAHs will work to lessen disparity between urban and rural hospitals. We also believe that the presence of incentive payments, market demands and rewards for data exchange, and future cost savings resulting from meaningful use will increase hospital adoption and meaningful use of EHRs.

D. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates would require spending in any 1 year $100 million in 1995 dollars, updated annually for inflation. In 2010, that threshold is approximately $135 million. UMRA does not address the total cost of a rule. Rather, it focuses on certain categories of cost, mainly those "Federal mandate" costs resulting from—(1) imposing enforceable duties on State, local, or tribal governments, or on the private sector, or (2) increasing the stringency of conditions in, or decreasing the funding of, State, local, or tribal governments under entitlement programs.

This rule imposes no substantial mandates on States. This program is voluntary for States and States offer the incentives at their option. The State role in the incentive program is essentially to administer the Medicaid incentive program. While this entails certain procedural responsibilities, these do not involve substantial State expense. In general, each State Medicaid Agency that participates in the incentive program will be required to invest in systems and technology to comply—States will have to identify and educate providers, evaluate their attestations and pay the incentive. However, the Federal government will fund 90 percent of the State's related administrative costs, providing controls on the total State outlay.

The investments needed to meet the meaningful use standards and obtain incentive funding are voluntary, and hence not "mandates"within the meaning of the statute. However, the potential reductions in Medicare reimbursement after FY 2015 are effectively mandates. We note that we have no discretion as to those potential payment reductions. Private sector EPs that voluntarily choose not to participate in the program may anticipate potential costs in the aggregate that may exceed $135 million; however, because EPs may choose for various reasons not to participate in the program, we do not have firm data for the percentage of participation within the private sector.

This RIA, taken together with the remainder of the preamble, constitutes the analysis required by UMRA.

E. Federalism

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates a final rule that imposes substantial direct requirement costs on State and local governments, preempts State law, or otherwise has Federalism implications. This final rule would not have a substantial direct effect on State or local governments, preempt State law, or otherwise have a Federalism implication. Importantly, State Medicaid agencies are receiving 100 percent match from the Federal government for incentives paid and a 90 percent match for expenses associated with administering the program. As previously stated, we believe that State administrative costs are minimal. We note that this final rule does add a new

business requirement for States, because of the systems that will need to be implemented to track and report on provider attestations, applications, and payments. States will also expend funds on the systems that must be built to conduct the tracking and reporting activities. States will interface with the NLR since registration of providers will be stored in the NLR. For tracking and making payments, we believe that most States will use their current MMIS system to make payments. States must inform us of their plans for payments, systems, etc, via the SMHP, PAPD and IAPD; additionally, States will indicate the costs associated with these activities in their PAPD and IAPD. CMS is providing 90 percent FFP to States for building the interface and/or for updates to the MMIS related to EHR incentive payment administration. We believe the Federal share of the 90 percent match will protect the States from burdensome financial outlays and, as noted above, States offer the Medicaid EHR incentive program at their option.

F. Anticipated Effects

The objective of the remainder of this RIA is to summarize the costs and benefits of the HITECH incentive program for the Medicare FFS, Medicaid, and Medicare Advantage (MA) programs. We also provide assumptions and a narrative addressing the potential costs to the industry for implementation of this technology.

G. HITECH Impact Analysis

1. Need for Regulation

This final rule would implement the provisions of the American Recovery and Reinvestment Act of 2009 (ARRA) (Pub. L. 111–5) that provide incentive payments to EPs, eligible hospitals, and CAHs participating in Medicare and Medicaid programs that adopt and meaningfully use certified EHR technology. The final rule specifies the initial criteria that an EP, eligible hospital, or CAH must meet in order to qualify for the incentive payment; calculation of the incentive payment amounts; payment adjustments under Medicare for covered professional services and inpatient hospital services provided by EPs, and eligible hospitals failing to meaningfully use certified EHR technology; and other program participation requirements. As noted earlier in this RIA, changes both in legislation and policy based on comments from the public have been taken into account for the preparation of this final impact analysis.

2. Alternatives Considered

As previously discussed in the alternatives section of the regulatory flexibility analysis, HHS has no discretion to change the incentive payments or payment reductions specified in the statute for providers that adopt or fail to adopt EHR and demonstrate meaningful use of certified EHR technology. However, we have discretion around how best to meet the HITECH Act requirements for meaningful use for FY 2011 and beyond, which we have exercised in this final rule. Additionally, we have used our discretion to appropriately time the registration, attestation and payment requirements to allow EPs and eligible organizations as much time as possible in coordination with the anticipated certification of EHR technology to obtain and meaningfully use certified EHRs. We recognize that there may be additional costs that result from various discretionary policy choices such as requiring additional functionality over the base level defined in the HITECH Act, however, those costs cannot be estimated and are not captured in this analysis.

3. Background and Assumptions

The principal costs of this final rule are the additional expenditures that will be undertaken by eligible entities in order to obtain the Medicare and Medicaid incentive payments to adopt, implement or upgrade and/or demonstrate meaningful use of certified EHR technology, and to avoid the Medicare payment adjustments that will ensue if they fail to do so. The estimates for the provisions affecting Medicare and Medicaid EPs, eligible hospitals, and CAHs are somewhat uncertain for several reasons: (1) The program is voluntary although payment adjustments will be imposed on Medicare providers who are unable to demonstrate meaningful use starting in 2015; (2) the criteria for the demonstration of meaningful use of certified EHR technology has been finalized for stage one but will change over time; (3) the HHS certification process although defined, has yet to be implemented;, and, (4) the impact of the financial incentives and payment adjustments on the rate of adoption of certified EHR technology by EPs, eligible hospitals, and CAHs is difficult to predict. The net costs and savings shown for this program represent two possible scenarios and actual impacts could differ substantially.

As written in the preamble, this final rule describes the incentive payments for EPs, eligible hospitals, and CAHs for adopting and demonstrating meaningful use of certified EHR technology. This impact analysis addresses the costs and benefits to the Medicare and Medicaid programs, as well as general implementation costs for eligible hospitals, CAHs and EPs.

Detailed information about the incentive program, the specific payment amounts and how those payments will be paid, is provided in section II of this final rule. Based on input from a number of internal and external sources, including the Government Accountability Office (GAO) and CBO, we calculated the numbers of EPs and eligible hospitals, including CAHs under Medicare, Medicaid, and MA and used them throughout the analysis.

- About 553,200 Medicare FFS EPs in 2011 (some of which will also be Medicaid EPs).
- About 14 percent of the total EPs are hospital-based Medicare EPs, and are not eligible for the program. This leaves approximately 477,500 nonhospital-based Medicare EPs in 2011.
- Twenty percent of the nonhospital-based Medicare EPs (approximately 95,500 Medicare EPs in 2011) are *also* eligible for Medicaid (meet the 30 percent Medicaid patient volume criteria), but can only be paid under one program. We assume that any EP in this situation will choose to receive the Medicaid incentive payment, because it is larger.
- About 44,100 non-Medicare eligible EPs (such as dentists, pediatricians, and eligible non-physicians such as certified nurse-midwives, nurse practitioners and physicians assistants) will be eligible to receive the Medicaid incentive payments.
- 5,011 eligible hospitals comprised of the following:
  - ++ 3,620 acute care hospitals.
  - ++ 1,302 CAHs
  - ++ 78 children's hospitals (Medicaid only).
  - ++ 11 cancer hospitals (Medicaid only).
- All eligible hospitals, except for children's and cancer hospitals, may qualify and apply for both Medicare and Medicaid incentive payments.
- 12 MA Organizations (about 28,000 EPs, and 29 hospitals) would be eligible for incentive payments.
- Payments can begin as early as third quarter FY 2011.

4. Industry Costs and Adoption Rates

To estimate the impact on healthcare providers we used information from four studies cited previously. Based on these studies, we continue to estimate for EPs, the average adopt/implement/

upgrade cost is $54,000 per physician FTE, while annual maintenance costs average $10,000 per physician FTE.

For all eligible hospitals, the range is from $1 million to $100 million. Although reports vary widely, we anticipate that the average would be $5 million to achieve meaningful use, because providers who would like to qualify as meaningful users of EHRs will need to purchase certified EHRs. We further acknowledge that "certified EHRs" may differ in many important respects from the EHRs currently in use and may differ in the functionalities they contain. We estimate $1 million for maintenance, upgrades, and training each year. Industry costs are important, in part, because EHR adoption rates will be a function of these industry costs and the extent to which the costs of "certified EHRs" are higher than the total value of EHR incentive payments available to EPs and eligible hospitals (as well as adjustments, in the case of the Medicare EHR incentive program) and any perceived benefits including societal benefits. Because of the uncertainties surrounding industry cost estimates, we have made various assumptions about adoption rates in the following analysis in order to estimate the budgetary impact on the Medicare and Medicaid programs.

For an eligible Medicaid EP, the first year incentive can be based on adoption, implementation, and upgrade costs. Previously, we noted that section 1903(t)(4)(C) of the Act gives the Secretary the authority to determine average allowable costs for certified EHR technology. The Secretary studied average costs associated with the purchase, initial implementation, and upgrade of certified EHR technology, including support services and initial training.

Sections 1903(t)(1)(A) and 1903(t)(4) of the Act specify that EPs may not receive incentive payments in excess of 85 percent of the net average allowable costs of certified EHR technology, with such net average allowable costs capped at $25,000 in the first year (and $10,000 in each of the subsequent years).

a. Costs of EHR Adoption for EPs

Previously, we described four studies used to estimate costs of implementation including the purchase and installation of hardware and software, training, as well as productivity losses associated with implementation and training. Each of these studies was conducted several years ago, and did not control for type of EHR, functionality, physician practice type or size. Furthermore, EHRs were not being built against any particular consensus standard, nor was the concept of "meaningful use" a factor. Thus, the cost of implementing and maintaining certified EHR technology which meets the requirements established in this regulation might exceed the estimates from these studies.

One average estimate of the cost per physician for implementation is around $35,000. A similar study of community health centers estimated costs to average $54,000 per physician FTE. In this study, the authors explained that implementation costs varied between entities for hardware, software, installation, and training. After implementation, there were ongoing operating costs estimated at $21,000 per year for a practice of four physicians. The CBO paper, Evidence on the Costs and Benefits of Health Information Technology, May 2008, in attempting to estimate the total cost of implementing health IT systems in office-based medical practices, recognized the complicating factors of EHR types, available features and differences in characteristics of the practices that are adopting them. The CBO estimated a cost range of $25,000 to $45,000 per physician. In the CBO study, operating costs added $3,000 to $9,000 per physician per year. Finally, a 2005 paper from AHRQ stated that the average purchase and implementation cost of an EHR could be $32,606 per FTE physician. Maintenance costs were an additional $1,500 per physician, per month, or $18,000 per year. Smaller practices had the highest implementation costs per physician at $37,204. Based on the studies cited, eligible providers will be eligible to receive the maximum incentive permitted under the statute, because the implementation and maintenance costs we have estimated exceed the caps for net average allowable costs set in the statute.

In calculating the impact of the EHR incentive program for Medicaid EPs, we assumed that approximately 20 percent of the EPs eligible for the Medicare incentive payment program are also eligible for Medicaid EHR incentive payments (about 95,500 in 2011). Since the Medicaid incentive payments are higher than those for Medicare and EPs can only receive payments from one program, we assume the dually eligible EPs will receive their payments through the Medicaid program. It is also important to note that just as there is overall variation in state Medicaid programs, we anticipate there will be variation in the design and timing of state Medicaid EHR incentive programs. New data on the pace of state planning for meaningful use was used to adjust Medicaid adoption scenarios. Thus, how and when providers apply for meaningful use through Medicaid will likely differ by state. Medicaid also offers incentive payments for dentists, certified nurse-midwives, nurse practitioners and certain physicians' assistants. While minimal, we have incorporated the sum of these groups in Table 51. We have estimated a range of Medicaid EPs that will be meaningful users each calendar year. The last line represents the range of predicted meaningful EHR users each calendar year. The Medicaid penetration rate for EPs is consistent with the analysis that was used for the Medicare EPs, but without the behavioral limitations imposed by the Medicare current statute SGR payment reductions. We assumed a modest behavioral response by Medicaid EPs to the Medicaid incentive payments resulting in an increase over baseline participation.

b. Costs of EHR Adoption for Eligible Hospitals

The American Hospital Association (AHA) conducts annual surveys that among other measures, track hospital spending. We have updated these data to reflect the latest figures from the 2008 AHA Survey. Costs at these levels of adoption were significantly higher in 2008 than 2007. This may better reflect the costs of implementing additional functionalities. We have also updated the number of discharges using the most recent cost report data available. The range in yearly information technology spending among hospitals is large—from $36,000 to over $32 million based on 2007 and 2008 AHA data. EHR system costs specifically were reported by experts to run as high as $20 million to $100 million; HHS discussions with experts led to cost ranges for adoption that varied by hospital size and level of EHR system sophistication. Research to date has shown that adoption of comprehensive EHR systems is limited. In the aforementioned AHA study, 1.5 percent of these organizations had comprehensive systems, which were defined as hospital-wide clinical documentation of cases, test results, prescription and test ordering, plus support for decision-making that included treatment guidelines. Some 10.9 percent have a basic system that does not include physician and nursing notes, and can only be used in one area of the hospital. Applying a similar standard to the 2008 AHA data results in roughly 3–4 percent of hospitals having comprehensive systems and 12 to 13 percent having basic systems. According to hospital CEOs, the main barrier to adoption is the cost of the

systems, and the lack of capital. Hospitals have been concerned that they will not be able to recoup their investment, and they are already operating on the smallest of margins. Because uptake of advanced systems is low, it is difficult to get a solid average estimate for implementation and maintenance costs that can be applied across the industry. In addition, we recognize that there are additional industry costs associated with adoption and implementation of EHR technology that are not captured in our estimates that eligible entities will incur. Because the impact of those activities, such as reduced staff productivity related to learning how to use the EHR technology, the need to add additional staff to work with HIT issues, administrative costs related to reporting, and the like are unknown at this time and difficult to quantify.

5. Medicare Incentive Program Costs

a. Medicare Eligible Professionals (EPs)

In the proposed rule, CMS said that an EP would be a hospital-based EP and therefore ineligible to receive a Medicare or Medicaid EHR incentive payment if more than 90 percent of their services are provided in the following place of service (POS) codes for HIPAA standard transactions: 21—Inpatient Hospital, 22—Outpatient Hospital, 23—Emergency Room.

However, as previously noted here and discussed elsewhere in this final rule, Congress amended the law to include only POS codes 21 (inpatient) and 23 (emergency room), excluding 22 (outpatient hospital), thereby permitting some hospital-based EPs to qualify for the incentive payment. Accordingly we have updated our tables to reflect the increased number of EPs that may now qualify for the incentive payments, and those revisions to the numbers flow throughout these updated tables.

To determine the estimated costs of the Medicare incentives for EPs we first needed to determine the EPs with Medicare claims. Then, we calculated that about 14 percent of those EPs are hospital-based, based on the definition final in § 495.4, and therefore, do not qualify for incentive payments. This percentage of EPs were subtracted from the total number of EPs who have claims with Medicare. These numbers were tabulated from Medicare claims data.

We have also estimated that about 20 percent of EPs that are not hospital-based will qualify for Medicaid incentive payments and will choose that program because the payments are higher. Of the remaining EPs, we have estimated the percentage which will be meaningful users each calendar year. As discussed previously our estimates for the number of EPs that will successfully demonstrate meaningful use of certified EHR technology is uncertain, so we established high and low scenarios to account for high and low rates of demonstration of meaningful use.

The percentage of Medicare EPs who will satisfy the criteria for demonstrating meaningful use of certified EHR technology and will qualify for incentive payments is a key, but a highly uncertain factor. Our Medicare EHR adoption assumptions for EPs are also affected by the current situation with Medicare physician fee schedule payment rates. As noted previously, under current law (that is, the SGR system formulas), physician payments will be reduced by 21.3 percent beginning June 1, 2010, and are scheduled to be further reduced beginning in CY 2011. Such reductions would almost certainly cause major changes in physician behavior, enrollee care, and other Medicare provider payments, but the specific nature of these changes is exceptionally uncertain. Under a current law scenario, the EHR incentives or Medicare payment adjustments would exert only a minor influence on physician behavior relative to these very large payment reductions. Behavioral changes resulting from these scheduled payment reductions are not included in our estimate and likewise do not assume any additional behavioral changes from EHR incentive payments. Accordingly, the estimated number of non-hospital based Medicare EPs, (including those additional EPs who may now qualify under the revised definition), who will demonstrate meaningful use of certified EHR technology over the period CYs 2011 through 2019 is as shown in Table 22.

TABLE 22: Medicare EPs Demonstrating Meaningful Use of Certified EHR Technology, High and Low Scenario

	Calendar Year								
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
EPs who have claims with Medicare (thousands)	553.2	558.9	564.6	570.3	576.0	581.7	587.5	593.3	599.0
Non-Hospital Based EPs (thousands)	477.5	482.4	487.3	492.2	497.1	502.1	507.1	512.0	517.0
EPs that are both Medicare and Medicaid EPs (thousands)	95.5	96.5	97.5	98.4	99.4	100.4	101.4	102.4	103.4
Low Scenario:									
Percent of EPs who are Meaningful Users	10	13	15	18	21	24	28	32	36
Meaningful Users (thousands)	39.9	48.7	58.8	70.2	83.1	97.3	112.9	129.9	148.1
High Scenario:									
Percent of EPs who are Meaningful Users	36	40	44	49	53	58	62	66	70
Meaningful Users (thousands)	136.8	154.7	173.3	192.6	212.2	231.9	251.3	270.4	288.8

Under the HITECH Act, EPs can receive up to 5 years of Medicare incentive payments for the demonstration of meaningful use of certified EHR technology. These payments are the lesser of 75 percent of the physician's allowed charges for the year or a specified maximum amount, which declines from a possible $18,000 incentive payment for the first payment year (2011 or 2012) to a $2,000 incentive payment for the fifth payment year. EPs in HPSAs receive incentives that are 10 percent higher than the maximum amounts. Hospital-based EPs are not eligible for the Medicare EP incentive payments. EPs may choose to receive incentive payments from either Medicare or Medicaid, (with some limitations on switching programs) but not from both.

The standard full amount of Medicaid incentive payments that an EP could receive is larger than the standard full amount for the Medicare EP incentive payments: of $63,750 versus $44,000 for Medicare. Medicare incentive payments can first be paid to EPs in CY 2011; and 2012 is the last year that an EP can start to receive incentives and obtain the full 5 years of payments. EPs who first qualify in CY 2013 would be limited to an incentive of $15,000 for the first year, and may be eligible to receive 4 years of incentive payments. EPs who first qualify in CY 2014 would be limited to an incentive of $12,000 for the first year and may be eligible to receive 3 years of incentive payments. For the Medicare program, incentives are not payable after CY 2016, and EPs who first demonstrate meaningful use in CY 2015 or later are not eligible for EHR incentive payments.

Medicare payment adjustments will apply in CY 2015 and later to EPs who cannot demonstrate meaningful use of certified EHR technology, regardless of whether they received an EHR incentive payment or not. Specifically, the Medicare Physician Fee Schedule payments for an EP who cannot demonstrate meaningful use of certified EHR technology would be reduced by 1 percentage point in CY 2015, two percentage points in CY 2016, and 3 percentage points in CY 2017, and between 3 and 5 percentage points starting in CY 2018. The HITECH Act gives the Secretary the authority, beginning in CY 2018, to increase these reductions by 1 percentage point each year, but not more than 5 percentage points overall, if the Secretary finds the proportion of EPs who are meaningful EHR users is less than 75 percent.

Each year a transfer will be made between the general fund of the Treasury and the Part B account of the Supplemental Medical Insurance (SMI) trust fund to offset the incentives paid or payment adjustments made during the year. In this way, the Part B beneficiary premium will not be affected by the EP payment incentives.

We estimate that there are 12 MA organizations that might be eligible to participate in the EHR incentive program. Those plans have about 28,000 EPs.

Our estimates of the incentive payment costs and payment adjustment savings reflect our assumptions about the proportion of EPs who will demonstrate meaningful use of certified EHR technology. These assumptions were developed based on a review of recent studies and discussions with subject matter experts. We project that a growing proportion of EPs will adopt certified EHR technology that meets the standards even in the absence of the legislated incentives. This number could be higher or lower depending on the final meaningful use definition adopted, physicians' access to capital and implementation expertise, the success of the other HITECH programs in reaching physicians, and other factors.

Specifically, our assumptions are based on literature estimating current rates of physician EHR adoption and rates of diffusion of EHRs and similar technologies. There are a number of studies that have attempted to measure the rate of adoption of electronic medical records (EMR) among physicians prior to the enactment of the HITECH Act (see, for example, Funky and Taylor (2005) The State and Pattern of Health Information Technology Adoption. RAND Monograph MG–409. Santa Monica: The RAND Corporation; Ford, E.W., Menachemi, N., Peterson, L.T., Huerta, T.R. (2009) "Resistance is Futile: But it is Slowing the Pace of EHR Adoption Nonetheless" Journal of the American Informatics Association 16(3): 274–281). We started with the estimated rate of EHR adoption from the study with the most rigorous definition, but note that the meaningful criteria are not equivalent to a fully functional system as defined in this study. (DesRoches, CM, Campbell, EG, Rao, SR et al. (2008) "Electronic Health Records in Ambulatory Care—A National Survey of Physicians" New England Journal of Medicine 359(1): 50–60). For the low scenario, we then inflated that number (4 percent) to a 2011 baseline using the numbers of physicians reporting in that survey that they had EHR implementation underway. We assumed that the same proportion of them would be implementing fully-functional EHRs as in the baseline (30 percent of those with basic systems.) We then trended this number forward using the trajectory mapped out by Ford et al. using the data from the period prior to FY 2004 since the slower rate of adoption during the FY 2005 through 2007 period was thought to be caused by policy uncertainty which this regulation should resolve.

Given the revisions to the meaningful use criteria in this final rule and the nationwide implementation of the Regional Extension Center Program, the likelihood of reaching the high scenario has increased. However, actual adoption trends could be significantly different from these assumptions, given the elements of uncertainty we describe throughout this analysis.

Net costs for the low scenario of the Medicare EP portion of the HITECH Act are shown in Table 23.

TABLE 23: Estimated Costs (+) and Savings (–) for Medicare EPs Demonstrating Meaningful Use of Certified EHR Technology, Low Scenario (in billions)

Fiscal Year	Incentive Payments	Payment Adjustment Receipts	Benefit Payments	Net Total
2009	—	—	—	—
2010	—	—	—	—
2011	$0.2	—	—	$0.2
2012	$1.0	—	—	$1.0
2013	$0.9	—	—	$0.9
2014	$0.6	—	—	$0.6
2015	$0.5	–$0.6	—	–$0.1
2016	$0.3	–$1.0	—	–$0.6
2017	$0.1	–$1.4	—	–$1.3
2018	—	–$1.6	—	–$1.6
2019	—	–$1.6	—	–$1.6
Total, 2009-2014	$2.6	—	—	$2.6
Total, 2009-2019	$3.6	–$6.1	—	–$2.5

The estimated net costs for the high scenario of the Medicare EP portion of the HITECH Act are shown in Table 24.

TABLE 24: Estimated Costs (+) and Savings (–) for Medicare EPs Demonstrating Meaningful Use of Certified EHR Technology, High Scenario (in billions)

Fiscal Year	Incentive Payments	Payment Adjustment Receipts	Benefit Payments	Net Total
2009	—	—	—	—
2010	—	—	—	—
2011	$0.6	—	—	$0.6
2012	$2.3	—	—	$2.3
2013	$2.0	—	—	$2.0
2014	$1.3	—	—	$1.3
2015	$1.1	–$0.4	—	$0.7
2016	$0.7	–$0.6	—	$0.1
2017	$0.3	–$0.8	—	–$0.5
2018	—	–$0.8	—	–$0.8
2019	—	–$0.8	—	–$0.8
Total, 2009-2014	**$6.2**	**—**	**—**	**$6.2**
Total, 2009-2019	**$8.3**	**–$3.4**	**—**	**$5.0**

b. Medicare Eligible Hospitals and CAHs

In brief, the estimates of hospital adoption were developed by calculating projected incentive payments (which are driven by discharges), comparing them to projected costs of attaining meaningful use, and then making assumptions about how rapidly hospitals would adopt given the fraction of their costs that were covered. In addition, our estimates have been updated to reflect that the additional challenges likely to be experienced in the adoption of EHRs among CAHs will be partially ameliorated by supplements to Regional Extension Center funding to assist CAHs with EHR adoption.

Specifically, the first step in preparing estimates of Medicare program costs for eligible hospitals was to determine the amount of Medicare incentive payments that each hospital in the country could potentially receive under the statutory formula, based on its admission numbers (total patients and Medicare patients). The total incentive payments potentially payable over a 4-year period vary significantly by hospitals' inpatient caseloads, ranging from a low of about $11,000 to a high of $12.9 million, with the median being $3.8 million. The potential Medicare incentive payments for each eligible hospital were compared with the hospital's expected cost of purchasing and operating certified EHR technology. Costs of adoption for each hospital were estimated using data from the 2008 AHA annual survey and IT supplement. Estimated costs varied by size of hospital and by the likely status of EHR adoption in that class of hospitals. Hospitals were grouped first by size (CAHs, non-CAH hospitals under 400 beds, and hospitals with 400 or more beds) because EHR adoption costs do vary by size: namely, larger hospitals with more diverse service offerings and powerful physician staffs generally implement more customized systems than smaller hospitals that might purchase off-the-shelf products. We then calculated the proportion of hospitals within each class that were at one of three levels of EHR adoption: (1) Hospitals which had already implemented relatively advanced systems that included CPOE systems for medications; (2) hospitals which had implemented more basic systems through which lab results could be shared, but not CPOE for medications; and (3) hospitals starting from a base level either neither CPOE or lab reporting. The CPOE for medication standard was chosen because expert input indicated that the CPOE standard in the final meaningful use definition will be the hardest one for hospitals to meet. Table 25 provides these proportions.

TABLE 25: Hospital IT Capabilities By Hospital Size

	Levels of Adoption							
	Any CPOE Meds		Lab Results		Neither		Total	
Hospital Size	Number of Hospitals	Percentage	Number of Hospitals	Percentage	Number of Hospitals	Percentage	Number of Hospitals	Percentage
CAHs	176	19%	440	48%	293	32%	909	23%
Small/Medium	817	31%	1,352	51%	462	18%	2,631	67%
Large (400+beds)	216	54%	163	41%	18	5%	397	10%
Total	1209	31%	1955	50%	773	20%	3,937	100%

We then calculated the costs of moving from these stages to meaningful use for each class of hospital, assuming that even for hospitals with CPOE systems they would incur additional costs of at least 10 percent of their IT budgets. These costs were based on cross-sectional data from the AHA survey and thus do not likely represent the true costs of implementing systems. We have updated these data to reflect the latest figures from the 2008 AHA Survey. Costs at these levels of adoption were significantly higher in 2008 than 2007. This may better reflect the costs of implementing additional functionalities. We have also updated the number of discharges using the most recent cost report data available. Under the HITECH Act, an eligible hospital can receive up to 4 years of Medicare incentive payments for the demonstration of meaningful use of certified EHR technology. These payments reflect the ratio of Medicare inpatient days to total inpatient days and are adjusted by transition factors of 100, 75, 50, and 25 percent for the first through fourth implementation years respectively. [Medicare incentive payments can first be paid to hospitals in FY 2011, and FY 2013 is the last year that a hospital can start to receive incentives and obtain the full 4-year transition rates.] Eligible hospitals that first qualify in FY 2014 or FY 2015 will only receive the transition portions that apply to eligible hospitals who implement their EHR in FY 2013 (for example, 75 percent in FY 2014 and 50 percent in FY 2015). Eligible hospitals first demonstrating meaningful use in FY 2016 or later are not eligible for incentive payments. Medicare payment adjustments will be applied beginning in FY 2015 to eligible hospitals that cannot demonstrate meaningful use of certified EHR technology. Special rules apply to CAHs.

We estimate that there are 12 MAOs that might be eligible to participate in the incentive program. Those plans have 29 eligible hospitals. The costs for the MA program have been included in the overall Medicare estimates.

Again to illustrate the uncertainty, we are providing two scenarios for our estimates. Our high scenario estimated net costs for section 4102 of the HITECH Act are shown in Table 26: Estimated costs (+) and savings (−) for eligible hospitals adopting certified EHRs. This provision is estimated to increase Medicare hospital expenditures by a net total of $10.1 billion during FYs -2011 through 2019.

TABLE 26: Estimated Costs (+) and Savings (–) for Medicare Eligible Hospitals Demonstrating Meaningful Use of Certified EHR Technology, High Scenario (in billions)

Fiscal Year	Incentive Payments	Payment Adjustment Receipts	Benefit Payments	Net Total
2009	—	—	—	—
2010	—	—	—	—
2011	$0.5	—	([1])	$0.5
2012	$2.1	—	([1])	$2.1
2013	$2.2	—	([1])	$2.2
2014	$1.9	—	([1])	$1.9
2015	$2.1	-$0.3	([1])	$1.8
2016	$1.3	-$0.1	([1])	$1.2
2017	$0.5	-$0.1	([1])	$0.5
2018	—	([1])	([1])	([1])
2019	—	—	([1])	([1])
Total, 2009-2014	$6.7	—	–$0.1	$6.7
Total, 2009-2019	$10.7	–$0.5	–$0.2	$10.1

[1] Savings of less than $50 million.

We are also providing the estimates for a low scenario in Table 27.

TABLE 27: Estimated Costs (+) and Savings (–) for Medicare Eligible Hospitals Demonstrating Meaningful Use of Certified EHR Technology, Low Scenario (in billions)

Fiscal Year	Incentive Payments	Payment Adjustment Receipts	Benefit Payments	Net Total
2009	—	—	—	—
2010	—	—	—	—
2011	$0.2	—	([1])	$0.2
2012	$0.9	—	([1])	$0.9
2013	$1.1	—	([1])	$1.1
2014	$1.2	—	([1])	$1.2
2015	$1.4	–$0.9	([1])	$0.5
2016	$1.2	–$0.6	([1])	$0.6
2017	$0.6	-$0.3	([1])	$0.3
2018	—	-$0.2	([1])	-$0.2
2019	—	-$0.1	([1])	-$0.1
Total, 2009-2014	$3.5	—	–$0.1	$3.5
Total, 2009-2019	$6.7	–$2.0	–$0.2	$4.6

[1] Savings of less than $50 million.

Based on the comparison of Medicare incentive payments and implementation/operating costs for each eligible hospital, (described above), we made the assumptions shown in Table 28, related to the prevalence of certified EHR technology for FY 2011 through 2018. As indicated, eligible hospitals that could cover the full cost of an EHR system through Medicare incentive payments were assumed to implement them relatively rapidly, and vice-versa. In other words, eligible hospitals will have an incentive to purchase and implement an EHR system if they perceive that a large portion of the costs will be covered by the incentive payments. Table 28 shows the high scenario estimates:

TABLE 28: Assumed Proportion of Eligible Hospitals with Certified EHR Technology, by Percentage of System Cost Covered by Medicare Incentive Payments, High Scenario

Fiscal Year	Incentive Payments as Percentage of EHR Technology Cost				
	100+%	75-100%	50-75%	25-50%	0-25%
2011	0.8	0.5	0.3	0.2	0.1
2012	0.95	0.65	0.5	0.35	0.2
2013	1.0	0.8	0.7	0.6	0.4
2014	1.0	0.95	0.85	0.75	0.6
2015	1.0	1.0	0.95	0.9	0.8
2016	1.0	1.0	1.0	0.95	0.9
2017	1.0	1.0	1.0	1.0	0.95
2018	1.0	1.0	1.0	1.0	1.0

For instance, under the high scenario 50 percent of eligible hospitals whose incentive payments would cover between 75 percent and 100 percent of the cost of a certified EHR system were assumed to have a certified system in FY 2011. In FY 2012, 65 percent of those hospitals were assumed to have a certified EHR system. All such hospitals were assumed to have a certified EHR system in FY 2015 and thereafter.

High rates of EHR adoption are anticipated prior to FY 2015 due to the large payment adjustments that will be imposed on eligible hospitals that are unable to demonstrate meaningful use beginning in FY 2015. Specifically, the Medicare "market basket" payment updates would be reduced (on a noncumulative basis) by one-fourth, one-half, and three-fourths for FYs 2015, 2016, and 2017 and later, respectively, for eligible hospitals that were not meaningful users of certified EHR technology. However, we heard from industry experts that issues surrounding the capacity of vendors and expert consultants to support implementation, issues of access to capital, and competing priorities in responding to payer demand will limit the number of hospitals that can adopt advanced systems in the short-term. Therefore, we cannot be certain of the adoption rate for hospitals due to these factors and others previously outlined in this preamble, and so we provide two scenarios which are examples of what we believe are possible low rates and high rates of adoption.

Table 29 shows the low scenario estimates.

TABLE 29: Assumed Proportion of Eligible Hospitals with Certified EHR Technology, by Percentage of System Cost Covered by Medicare Incentive Payments, Low Scenario

Fiscal Year	Incentive Payments as Percentage of EHR Technology Cost				
	100+%	75-100%	50-75%	25-50%	0-25%
2011	0.6	0.35	0.2	0.1	0.05
2012	0.65	0.4	0.25	0.15	0.1
2013	0.75	0.55	0.4	0.25	0.15
2014	0.9	0.75	0.55	0.4	0.3
2015	1.0	0.9	0.75	0.6	0.5
2016	1.0	1.0	0.9	0.85	0.75
2017	1.0	1.0	0.95	0.9	0.85
2018	1.0	1.0	1.0	0.95	0.9
2019	1.0	1.0	1.0	1.0	1.0

For large, organized facilities such as hospitals, we believe that the revenue losses caused by these payment adjustments would be a substantial incentive to adopt certified EHR technology, even in instances where the Medicare incentive payments would cover only a portion of the costs of purchasing, installing, populating, and operating the EHR system. Based on the assumptions about incentive payments as percentages of EHR technology costs in Table 29, we estimated that the great majority of eligible hospitals would qualify for at least a portion of the Medicare incentive payments that they could potentially receive, and only a modest number would incur penalties. Nearly all eligible hospitals are projected to have implemented certified EHR technology by FY 2019. Table 30 shows our high scenario estimated percentages of the total potential incentive payments associated with eligible hospitals that could demonstrate meaningful use of EHR systems. Also shown are the estimated percentages of potential incentives that would actually be paid each year.

TABLE 30: Estimated Percentage of Medicare Incentives Which Could be Paid for Meaningful Use of Certified EHR Technology Associated with Eligible Hospitals and Estimated Percentage Payable in Year, High Scenario

Fiscal Year	Percent Associated with Eligible Hospitals	Percent Payable in Year
2011	38.4%	38.4%
2012	53.5%	53.5%
2013	70.2%	70.2%
2014	82.6%	82.6%
2015	92.6%	54.2%
2016	96.9%	43.4%
2017	99.0%	—
2018	100.0%	—

For instance in FY 2012 under the high scenario, 53.5 percent of the total amount of incentive payments which could be payable in that year would be for eligible hospitals who have demonstrated meaningful use of certified EHR technology and therefore will be paid. In FY 2015 under the high scenario, 92.6 percent of the total amount of incentive payments which could be payable will be for hospitals who have certified EHR systems, but some of those eligible hospitals would have already received 4 years of incentive payments, and therefore 54.2 percent of all possible incentive payments actually paid in that year.

Table 31 shows the low scenario estimates.

TABLE 31: Estimated Percentage of Medicare Incentives Which could be paid for the Meaningful Use of Certified EHR Technology Associated with Eligible Hospitals and Estimated Percentage Payable in Year, Low Scenario

Fiscal Year	Percent Associated with Eligible Hospitals	Percent Payable in Year
2011	16.8%	16.8%
2012	21.8 %	21.8%
2013	32.1%	32.1%
2014	47.6%	47.6%
2015	66.4 %	49.6%
2016	85.9%	64.1%
2017	91.4%	—
2018	95.6 %	—

The estimated payments to eligible hospitals were calculated based on the hospitals' qualifying status and individual incentive amounts under the statutory formula. Similarly, the estimated penalties for nonqualifying hospitals were based on the market basket reductions and Medicare revenues. The estimated savings in Medicare eligible hospital benefit expenditures resulting from the use of hospital certified EHR systems are

discussed under "general considerations" at the end of this section. We assumed no future growth in the total number of hospitals in the U.S. because growth in acute care hospitals has been minimal in recent years.

Comment: The AHA surveyed 795 hospitals in January 2010 asking whether their EHR systems could meet each of the meaningful use objectives now and in coming years: 45 percent reported they could meet all Stage 1 objectives by 2015 meaning that the remainder might be subject to penalties.

Response: Their survey was based on our proposed definition of meaningful use. The definition of meaningful use in this final rule offers more flexibility and lower thresholds which we believe will make it easier for eligible hospitals to qualify for incentives. However we do acknowledge that the meaningful use criteria described in this final rule may still challenge hospitals to use their IT in ways that improve patient care and outcomes. We also acknowledge that smaller, more rural hospitals could experience added burden in achieving meaningful use related to timing and costs of implementation. Supplemental funding to Regional Extension Centers to assist CAHs will work to lessen disparity between urban and rural hospitals. We also believe that the presence of incentive payments, market demands and rewards for data exchange, and future cost savings resulting from meaningful use will increase hospital adoption and meaningful use of EHRs.

c. Critical Access Hospitals (CAHs)

We estimate that there are 1,302 CAHs eligible to receive EHR incentive payments. Given the financial assistance available under HITECH for Regional Extension Centers, whose priorities include assisting CAHs in EHR adoption, we estimate that the 19 percent of CAHs with relatively advanced EHR systems will achieve meaningful use before 2016. We also estimate that most of the remaining CAHs that have already adopted some kind of EHR system (48 percent of CAHs) will also achieve meaningful use by 2016. Our estimates regarding the incentives that will be paid to CAHs are incorporated into the overall Medicare and Medicaid program costs.

We note that in response to comments this final rule amends the definition of acute care hospital for purposes of the Medicaid EHR incentive payment program to generally include critical access hospitals that meet the Medicaid patient volume criteria. Thus, the change in the definition has required that we update our tables to reflect the increased number of hospitals that now may qualify for the Medicaid EHR incentive payment program under this new definition. The numbers and percentages from the revised tables are reflected throughout this final impact analysis. Additionally, EHR adoption rates have been adjusted now that CAHs will be eligible for both Medicare and Medicaid EHR incentive payments.

6. Medicaid Incentive Program Costs

Under section 4201 of the HITECH Act, States can voluntarily participate in the Medicaid incentive payment program and we have based our Medicaid incentive program costs on all States participating. Eligible hospitals and EPs can qualify for a Medicaid incentive payment for adopting, implementing, or upgrading in their first participation year, or for meaningful use, and up to an additional 5 years of incentive payments for demonstrating meaningful use of certified EHR technology. Under Medicaid, EPs include physicians (including pediatricians), dentists, certified nurse-midwives, nurse practitioners, and certain physician assistants. Initial incentive payments are available through 2016, and incentive payments cannot be made after 2021. The Medicaid hospital incentives are similar to those specified in section 4102 of the HITECH Act for Medicare, except that they must be paid out over at least 3 years and are spread out over a maximum of 6 years, are based on the ratio of Medicaid inpatient days to total days, and are not phased down as quickly as the Medicare payments based on the first year of payment. Medicaid hospitals can begin incentive payments through 2016, and incentive payments cannot be made after 2021. There are also additional hospitals, such as children's and cancer hospitals that are only eligible for Medicaid incentives.

EPs may qualify for Medicaid incentive payments if at least 30 percent of their patient volume is from Medicaid. (Separate rules apply for pediatricians.) As mentioned above, the Medicaid maximum incentive payments are larger than the corresponding Medicare payments. Various maximums are specified for eligible hospital and EP incentive payments. There are no Medicaid penalties for non-adoption of EHR systems or for failing to demonstrate meaningful use. The Federal costs for Medicaid incentive payments to providers who can demonstrate meaningful use of EHR technology were estimated similarly to the estimates for Medicare eligible hospital and EP. Table 32 shows our high estimates for the net Medicaid costs for eligible hospitals and EP.

TABLE 32: Estimated Federal Costs (+) and Savings (–) under Medicaid, High Scenario (in $billions)

Fiscal year	Incentive payments		Benefit payments	Net total
	Hospitals	Eligible professionals		
2009	—	—	—	—
2010	—	—	—	—
2011	0.8	0.9	([1])	1.7
2012	0.3	1.1	([1])	1.4
2013	0.9	1.0	([1])	1.9
2014	0.7	0.9	([1])	1.6
2015	0.6	1.1	([1])	1.7
2016	0.5	1.1	([1])	1.7
2017	0.4	0.9	([1])	1.3
2018	0.2	0.6	([1])	0.7
2019	0.0	0.3	([1])	0.3
Total, 2009-14	2.5	4.0	0.0	6.5
Total, 2009-19	4.3	8.0	-0.1	12.2

[1] Less than $50 million impact

Table 33 shows the low estimates for Medicaid costs and savings.

TABLE 33: Estimated Federal Costs (+) and Savings (–) under Medicaid, Low Scenario (in $billions)

Fiscal Year	Incentive Payments		Benefit Payments	Net Total
	Hospitals	Eligible Professionals		
2009	—	—	—	—
2010	—	—	—	—
2011	0.4	0.2	([1])	0.6
2012	0.1	0.4	([1])	0.5
2013	0.4	0.4	([1])	0.8
2014	0.4	0.4	([1])	0.8
2015	0.5	0.5	([1])	1.0
2016	0.7	0.6	([1])	1.3
2017	0.8	0.5	([1])	1.3
2018	0.4	0.4	([1])	0.9
2019	0.1	0.3	([1])	0.4
Total, 2009-14	1.3	1.4	0.0	2.7
Total, 2009-19	3.8	3.8	0.0	7.6

[1] Less than $50 million impact.

a. Medicaid EPs

To determine the Medicaid EP incentive payments, we first determined the number of qualifying EPs. As indicated above, we assumed that 20 percent of the non-hospital-based Medicare EPs would meet the requirements for Medicaid incentive payments (30 percent of patient volume from Medicaid). All of these EPs were assumed to choose the Medicaid incentive payments, as they are larger.

In addition, the total number of Medicaid EPs was adjusted to include EPs who qualify for the Medicaid incentive payments but not for the Medicare incentive payments, such as most pediatricians, dentists, certified nurse-midwives, nurse practitioners and physicians assistants. As noted previously there is much uncertainty about the rates of demonstration of meaningful use that will be achieved. Therefore, as we estimated for the Medicare EPs, we are providing high and low scenario estimates for Medicaid EPs.

Our high scenario estimates are listed in the Table 34.

TABLE 34: Assumed Number of Nonhospital Based Medicaid EPs Who Will Be Meaningful Users of Certified EHR Technology, High Scenario (All population figures are in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
EPs who have claims with Medicare	553.2	558.9	564.6	570.3	576.0	581.7	587.5	593.3	599.0
Non-Hospital based EPs	477.5	482.4	487.3	492.2	497.1	502.1	507.1	512.0	517.0
EPs who meet the Medicaid patient Volume Threshold	95.5	96.5	97.5	98.4	99.4	100.4	101.4	102.4	103.4
Medicaid Only EPs[1]	44.1	44.8	45.5	46.3	47.1	47.8	48.6	49.3	50.1
Total Medicaid	139.6	141.3	143.0	144.7	146.5	148.2	150.0	151.7	153.5
Percent of EPs receiving incentive payments during year	47.3%	66.3%	76.6%	82.2%	85.6%	88.8%	43.8%	25.0%	14.4%
Number of EPs receiving incentive payment during year	66.0	93.7	109.6	119.0	125.4	131.7	65.7	38.0	22.1
Percent of EPs who have ever received incentive payment	47.3%	66.3%	76.6%	82.2%	85.6%	88.8%	91.9%	94.7%	95.9%
Number of EPs who have ever received incentive payment	66.0	93.7	109.6	119.0	125.4	131.7	137.7	143.6	147.2

[1] Includes non hospital-based eligible pediatricians, dentists, certified nurse-midwives, nurse practitioners and physicians assistants. These numbers were not based on tabulated Medicaid data. Rather, a different methodology was used to estimate the EP counts for each group.

It should be noted that since the Medicaid EHR incentive payment program provides that a Medicaid EP can receive an incentive payment in their first year because he or she has demonstrated a meaningful use or because he or she has adopted, implemented, or upgraded certified EHR technology, these participation rates include not only meaningful users but eligible providers implementing certified EHR technology as well. Table 35 shows our low scenario estimates.

TABLE 35: Assumed Number of Nonhospital Based Medicaid EPs Who Will Be Meaningful Users of Certified EHR Technology, Low Scenario (All population figures are in thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019
EPs who have claims with Medicare	553.2	558.9	564.6	570.3	576.0	581.7	587.5	593.3	599.0
Non-Hospital based EPs	477.5	482.4	487.3	492.2	497.1	502.1	507.1	512.0	517.0
EPs who meet the Medicaid patient Volume Threshold	95.5	96.5	97.5	98.4	99.4	100.4	101.4	102.4	103.4
Medicaid Only EPs[1]	44.1	44.8	45.5	46.3	47.1	47.8	48.6	49.3	50.1
Total Medicaid	139.6	141.3	143.0	144.7	146.5	148.2	150.0	151.7	153.5
Percent of EPs receiving incentive payments during year	15.1%	24.0%	30.8%	36.0%	40.5%	45.3%	30.7%	21.9%	15.1%
Number of EPs receiving incentive payment during year	21.1	34.0	44.0	52.1	59.4	67.2	46.0	33.2	23.1
Percent of EPs who have ever received incentive payment	15.1%	24.0%	30.8%	36.0%	40.5%	45.3%	50.4%	55.7%	59.9%
Number of EPs who have ever received incentive payment	21.1	34.0	44.0	52.1	59.4	67.2	75.5	84.4	91.9

[1] Includes non hospital-based eligible pediatricians, dentists, certified nurse-midwives, nurse practitioners, and physicians assistants. These numbers were not based on tabulated Medicaid data. Rather, a different methodology was used to estimate the EP counts for each group.

b. Medicaid Hospitals

Medicaid incentive payments to most acute-care hospitals were estimated using the same adoption assumptions and methodology as described previously for Medicare eligible hospitals and shown in Table 36. Because hospitals' Medicare and Medicaid patient loads differ, we separately calculated the range of percentage of total potential incentives that could be associated with qualifying hospitals, year by year, and the corresponding actual percentages payable each year. Acute care hospitals and children's hospitals can spread aggregate Medicaid incentive payments over no less than 3 years, but no more than 6 years of payments, and acute care hospitals may qualify to receive both the Medicare and Medicaid incentive payments.

As stated previously, the estimated eligible hospital incentive payments were calculated based on the hospitals' qualifying status and individual incentive amounts payable under the statutory formula. The estimated savings in Medicaid benefit expenditures resulting from the use of certified EHR technology are discussed under "general considerations." We estimated the Medicaid incentives payable to children's hospitals as an add-on to the base estimate, using data on the number of children's hospitals compared to non-children's hospitals.

TABLE 36: Estimated Percentage of Potential Medicaid Incentives Associated with Eligible Hospitals and Estimated Percentage Payable Each Year, High Scenario

Fiscal Year	Percent Associated with Eligible Hospitals	Percent Payable in Year
2011	39.1%	39.1%
2012	54.4%	54.4%
2013	70.9%	70.9%
2014	83.1%	44.0%
2015	92.9%	38.5%
2016	97.1%	26.2%
2017	99.0%	14.0%
2018	100.0%	4.2%
2019	100.0%	0.0%

Table 37 shows our low scenario estimates.

TABLE 37: Estimated Percentage of Potential Medicaid Incentives Associated with Eligible Hospitals and Estimated Percentage Payable Each Year, Low Scenario

Fiscal Year	Percent Associated with Eligible Hospitals	Percent Payable in Year
2011	18.3%	18.3%
2012	23.3%	23.3%
2013	33.7%	33.7%
2014	49.2%	30.9%
2015	67.8%	44.5%
2016	86.5%	52.8%
2017	91.8%	37.3%
2018	95.9%	18.7%
2019	100.0%	0.0%

7. Benefits for All EPs and All Eligible Hospitals

In this final rule we have not quantified the overall benefits to the industry, nor to eligible hospitals, or EPs in the Medicare, Medicaid, or MA programs. We believe that the first 5 years of the incentive program will be dedicated to implementation activities, from installation of the technology to training to operational and behavioral changes. Information on the costs and benefits of adopting systems specifically meeting the requirements in this rule does not yet exist—and information on costs and benefits overall is limited (Goldzweig et al. 2009 "Costs and Benefits of Health Information

Technology: New Trends from the Literature" *Health Affairs.*)

Nonetheless, we believe there are benefits that can be obtained by eligible hospitals and EPs, including: reductions in medical record-keeping costs, reductions in repeat tests, decreases in length of stay, and reduced errors. Furthermore, there is limited but growing evidence to support the cost-saving benefits anticipated from wider adoption of EHRs. For example, at one hospital emergency room in Delaware, the ability to download and create a file with a patient's medical history saved the ER $545 per use, mostly on reduced waiting times. A pilot study of ambulatory practices found a positive ROI within 16 months and annual savings thereafter (Greiger et al. 2007, A Pilot Study to Document the Return on Investment for Implementing an Ambulatory Electronic Health Record at an Academic Medical Center *http://www.journalacs.org/article/S1072-7515%2807%2900390-0/abstract-article-footnote-1s.*) Some vendors have estimated that EHRs could result in cost savings of between $100 and $200 per patient per year. As adoption increases, there will be more opportunities to capture and report on cost savings and benefits. A number of relevant studies are required in the HITECH Act for this specific purpose, and the results will be made public, as they are available.

8. Benefits to Society

According to the recent CBO study "Evidence on the Costs and Benefits of Health Information Technology" *http://www.cbo.gov/ftpdocs/91xx/doc9168/05-20-HealthIT.pdf* when used effectively, EHRs can enable providers to deliver health care more efficiently. For example, the study states that EHRs can reduce the duplication of diagnostic tests, prompt providers to prescribe cost-effective generic medications, remind patients about preventive care reduce unnecessary office visits and assist in managing complex care. Further, the report claims that there is a potential to gain both internal and external savings from widespread adoption of health IT, noting that internal savings would likely be in the reductions in the cost of providing care, and that external savings could accrue to the health insurance plan or even the patient, such as the ability to exchange information more efficiently. The benefits resulting specifically from this final regulation are even harder to quantify because they represent, in many cases, adding functionality to existing systems and reaping the network externalities created by larger numbers of providers participating in information exchange.

Since the CBO study, additional research has emerged documenting the association of EHRs with improved outcomes among diabetics (Hunt, JS et al. (2009) "The impact of a physician-directed health information technology system on diabetes outcomes in primary care: a pre- and post-implementation study" Informatics in Primary Care 17(3):165–74; Pollard, C *et al.* (2009) "Electronic patient registries improve diabetes care and clinical outcomes in rural community health centers" Journal of Rural Health 25(1):77–84) and trauma patients (Deckelbaum, D. et al. (2009) "Electronic medical records and mortality in trauma patients "The Journal of Trauma: Injury, Infection, and Critical Care 67(3): 634–636), enhanced efficiencies in ambulatory care settings (Chen, C et al. (2009) "The Kaiser Permanente Electronic Health Record: Transforming and Streamlining Modalities Of Care."Health Affairs 28(2):323–333), and improved outcomes and lower costs in hospitals (Amarasingham, R. et al. (2009) "Clinical information technologies and inpatient outcomes: a multiple hospital study" Archives of Internal Medicine 169(2):108–14).

9. General Considerations

The estimates for the HITECH Act provisions were based on the economic assumptions underlying the President's 2011 Budget. Under the statute, Medicare incentive payments for certified EHR technology are excluded from the determination of MA capitation benchmarks. As noted previously, there is considerable uncertainty about the rate at which eligible hospitals, CAHs and EPs will adopt EHRs and other HIT. Nonetheless, we believe that the Medicare incentive payments and the prospect of significant payment penalties for not demonstrating meaningful use will result in the great majority of hospitals implementing certified EHR technology in the early years of the Medicare EHR incentive program. We expect that a steadily growing proportion of practices will implement certified EHR technology over the next 10 years, even in the absence of the Medicare incentives. Actual future Medicare and Medicaid costs for eligible hospital and EP incentives will depend in part on the standards developed and applied for assessing meaningful use of certified EHR technology. We expect to administer the requirements in such a way as to encourage adoption of certified EHR technology and facilitate qualification for incentive payments, and expect to adopt progressively demanding standards at each stage year. Certified EHR technology has the potential to help reduce medical costs through efficiency improvements, such as prompter treatments, avoidance of duplicate or otherwise unnecessary services, and reduced administrative costs (once systems are in place), with most of these savings being realized by the providers rather than by Medicare or Medicaid. To the extent that this technology will have a net positive effect on efficiency, then more rapid adoption of such EHR systems would achieve these efficiencies sooner than would otherwise occur, without the EHR incentives.

The CBO has estimated a modest level of such savings attributable to EHRs, with much of the amount associated with reductions in adverse drug-to-drug interactions. We expect a negligible impact on benefit payments to hospitals and EPs from Medicare and Medicaid as a result of the implementation of EHR technology.

In the process of preparing the estimates for this rule, we consulted with and/or relied on internal CMS sources, as well as the following sources:

- Congressional Budget Office (staff and publications).
- American Medical Association (staff and unpublished data).
- American Hospital Association.
- Actuarial Research Corporation.
- RAND Health studies on:

++ "The State and Pattern of Health Information Technology Adoption" (Fonkych & Taylor, 2005);

++ "Extrapolating Evidence of Health Information Technology Savings and Costs" (Girosi, Meili, & Scoville, 2005); and

++ "The Diffusion and Value of Healthcare Information Technology" (Bower, 2005).

- Kaiser Permanente (staff and publications).
- Miscellaneous other sources (Health Affairs, American Enterprise Institute, news articles and perspectives).

As noted at the beginning of this analysis, it is difficult to predict the actual impacts of the HITECH Act with much certainty at this time. We believe the assumptions and methods described herein are reasonable for estimating the financial impact of the provisions on the Medicare and Medicaid programs, but acknowledge the wide range of possible outcomes.

All financial analysis is calculated over a 10-year planning horizon, because though the incentive payments for Medicare EPs, CAHs and eligible

hospitals will only be paid for 5 years, the Medicaid incentives will cease in CY 2021. Starting in CY 2015, Medicare payment adjustments will begin.

10. Summary

The total cost to the Medicare and Medicaid programs is estimated to be $9.7 billion in transfers under the low scenario, and $27.4 billion under the high scenario, over a 10-year timeframe. The main reasons for the changes from the proposed rule are revised definitions of hospital-based eligible professional and Medicaid acute care hospitals, and updated data on discharges and costs of adoption among hospitals. We do not estimate total costs to the provider industry, but rather provide a possible per EP and per eligible hospital outlay for implementation and maintenance operations.

TABLE 51: Estimated EHR Incentive Payments and Benefits Impacts on the Medicare and Medicaid Programs of the HITECH EHR Incentive Program. (Fiscal Year) – (in billions) Low Scenario

Fiscal Year	Medicare Eligible		Medicaid Eligible		Total
	Hospitals	Professionals	Hospitals	Professionals	
2011	$0.2	$0.2	$0.4	$0.2	$1.0
2012	$0.9	$1.0	$0.1	$0.4	$2.4
2013	$1.1	$0.9	$0.4	$0.4	$2.8
2014	$1.2	$0.6	$0.4	$0.4	$2.6
2015	$0.5	-$0.1	$0.5	$0.5	$1.4
2016	$0.6	-$0.6	$0.7	$0.6	$1.3
2017	$0.3	-$1.3	$0.8	$0.5	$0.3
2018	-$0.2	-$1.6	$0.4	$0.4	-$1.0
2019	-$0.1	-$1.6	$0.1	$0.3	-$1.3
TOTAL	**$4.6**	**-$2.5**	**$3.8**	**$3.8**	**$9.7**

Table 39 shows the total costs from 2011 through 2019 for the high scenario after which the payment adjustments will be invoked.

Table 39: Estimated EHR Incentive Payments and Benefits Impacts on the Medicare and Medicaid Programs of the HITECH EHR Incentive Program. (Fiscal Year) – (in billions) High Scenario

Fiscal Year	Medicare Eligible		Medicaid Eligible		Total
	Hospitals	Professionals	Hospitals	Professionals	
2011	$0.5	$0.6	$0.8	$0.9	$2.8
2012	$2.1	$2.3	$0.3	$1.1	$5.8
2013	$2.2	$2.0	$0.9	$1.0	$6.1
2014	$1.9	$1.3	$0.7	$0.9	$4.8
2015	$1.8	$0.7	$0.6	$1.1	$4.2
2016	$1.2	$0.1	$0.5	$1.1	$2.9
2017	$0.5	-$0.5	$0.4	$0.9	$1.3
2018	—	-$0.8	$0.2	$0.6	0.0
2019	—	-$0.8	—	$0.3	-$0.5
TOTAL	**$10.1**	**$5.0**	**$4.3**	**$8.0**	**$27.4**

11. Explanation of Benefits and Savings Calculations

In our analysis, we assume that benefits to the program would accrue in the form of savings to Medicare, through the Medicare EP payment adjustments. Expected qualitative benefits, such as improved quality of care, better health outcomes, and the like, are still unable to be quantified at this time.

H. Accounting Statement

Whenever a rule is considered a significant rule under Executive Order 12866, we are required to develop an Accounting Statement indicating the

classification of the expenditures associated with the provisions of this final rule. Monetary annualized benefits and nonbudgetary costs are presented as discounted flows using 3 percent and 7 percent factors. Additional expenditures that will be undertaken by eligible entities in order to obtain the Medicare and Medicaid incentive payments to adopt and demonstrate meaningful use of certified EHR technology, and to avoid the Medicare payment adjustments that will ensue if they fail to do so are noted by a placeholder in the accounting statement. We are not able to explicitly define the universe of those additional costs, nor specify what the high or low range might be to implement EHR technology in this final rule.

Expected qualitative benefits include improved quality of care, better health outcomes, reduced errors and the like. Private industry costs would include the impact of EHR activities such as temporary reduced staff productivity related to learning how to use the EHR, the need for additional staff to work with HIT issues, and administrative costs related to reporting.

TABLE 40: Accounting Statement: Classification of Estimated Expenditures CYs 2010 through 2019

	Category: Transfers	
Annualized Monetized	Low Estimate	High Estimate
7%	1,147.9 million	3,102.2 million
3%	1,038.7 million	2,902.4 million
From Whom to Whom	Federal government to eligible professionals and hospitals.	
	Category: Industry Costs Associated with Reporting Requirements	
	Low Estimate	High Estimate
	626.62 million	652.35 million
From Whom to Whom	Private industry.	
	Category: Other Industry Costs	
Annualized Monetized	Low Estimate	High Estimate
7%	TBD	TBD
3%	TBD	TBD
From Whom to Whom	Private industry.	

In accordance with the provisions of Executive Order 12866, this final rule was reviewed by the Office of Management and Budget.

List of Subjects

42 CFR Part 412

Administrative practice and procedure, Health facilities, Medicare, Puerto Rico, Reporting and recordkeeping requirements.

42 CFR Part 413

Health facilities, Kidney diseases, Medicare, Reporting and recordkeeping requirements.

42 CFR Part 422

Administrative practice and procedure, Health facilities, Health maintenance organizations (HMO), Medicare, Penalties, Privacy, Reporting and recordkeeping requirements.

42 CFR Part 495

Administrative practice and procedure, Electronic health records, Health facilities, Health professions, Health maintenance organizations (HMO), Medicaid, Medicare, Penalties, Privacy, Reporting and recordkeeping requirements.

■ For the reasons set forth in the preamble, the Centers for Medicare & Medicare Services amends 42 CFR Chapter IV as follows:

PART 412—PROSPECTIVE PAYMENT SYSTEMS FOR INPATIENT HOSPITAL SERVICES

■ 1. The authority citation for part 412 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart D—Basic Methodology for Determining Prospective Payment Federal Rates for Inpatient Operating Costs

■ 2. Section 412.64 is amended as follows:

■ A. Revising paragraph (d)(2)(i)(B).

■ B. Adding new paragraphs (d)(2)(i)(C) and (d)(3).

The revision and additions read as follows:

§ 412.64 Federal rates for inpatient operating costs for Federal fiscal year 2005 and subsequent fiscal years.

* * * * *

(d) * * *

(2) * * *

(i) * * *

(B) For fiscal year 2007 through 2014, by 2 percentage points.

(C) For fiscal year 2015 and subsequent fiscal years, by one-fourth.

* * * * *

(3) Beginning in fiscal year 2015, in the case of a "subsection (d) hospital," as defined under section 1886(d)(1)(B) of the Act, that is not a meaningful electronic health record (EHR) user as defined in part 495 of this chapter, three-fourths of the applicable percentage change specified in paragraph (d)(1) of this section is reduced—

(i) For fiscal year 2015, by 33⅓ percent;

(ii) For fiscal year 2016, by 66⅔ percent; and

(iii) For fiscal year 2017 and subsequent fiscal years, by 100 percent.

* * * * *

PART 413—PRINCIPLES OF REASONABLE COST REIMBURSEMENT; PAYMENT FOR END-STAGE RENAL DISEASE SERVICES; OPTIONAL PROSPECTIVELY DETERMINED PAYMENT RATES FOR SKILLED NURSING FACILITIES

■ 3. The authority citation for part 413 continues to read as follows:

Authority: Secs. 1102, 1812(d), 1814(b), 1815, 1833(a), (i), and (n), 1861(v), 1871, 1881, 1883, and 1886 of the Social Security Act (42 U.S.C. 1302, 1395d(d), 1395f(b), 1395g, 1395l(a), (i), and (n), 1395x(v), 1395hh, 1395rr, 1395tt, and 1395ww); and sec. 124 of Public Law 106–133 (113 Stat. 1501A–332).

Subpart E—Payments to Providers

■ 4. Section 413.70 is amended as follows:
■ A. Revising paragraph (a)(1).
■ B. Adding new paragraphs (a)(5), (a)(6) and (a)(7).

The revision and additions read as follows:

§ 413.70 Payment for services of a CAH.

(a) *Payment for inpatient services furnished by a CAH (other than services of distinct part units).* (1) Effective for cost reporting periods beginning on or after January 1, 2004, payment for inpatient services of a CAH, other than services of a distinct part unit of the CAH and other than the items included in the incentive payment described in paragraph (a)(5) of this section and subject to the adjustments described in paragraph (a)(6) of this section, is 101 percent of the reasonable costs of the CAH in providing CAH services to its inpatients, as determined in accordance with section 1861(v)(1)(A) of the Act and the applicable principles of cost reimbursement in this part and in part 415 of this chapter, except that the following payment principles are excluded when determining payment for CAH inpatient services:

(i) Lesser of cost or charges;

(ii) Ceilings on hospital operating costs;

(iii) Reasonable compensation equivalent (RCE) limits for physician services to providers; and

(iv) The payment window provisions for preadmission services, specified in § 412.2(c)(5) of this subchapter and § 413.40(c)(2) of this part.

* * * * *

(5) A qualifying CAH receives an incentive payment for the reasonable costs of purchasing certified EHR technology in a cost reporting period during a payment year as determined under § 495.106 of this chapter in lieu of payment for such reasonable costs under paragraph (a)(1) of this section.

(6)(i) For cost reporting periods beginning in or after FY 2015, if a CAH is not a qualifying CAH, as defined in § 495.106(a) of this chapter, then notwithstanding the percentage applicable in paragraph (a)(1) of this section, the reasonable costs of the CAH in providing CAH services to its inpatients are adjusted, by the following applicable percentage:

(A) For cost reporting periods beginning in FY 2015, 100.66 percent.

(B) For cost reporting periods beginning in FY 2016, 100.33 percent.

(C) For cost reporting periods beginning in FY 2017 and each subsequent fiscal year, 100 percent.

(ii) A CAH may, on a case-by case basis, be exempt from the application of the adjustments made under this paragraph, if CMS or its Medicare contractors determine, on an annual basis, that requiring the CAH to become a qualifying CAH under § 495.106 of this chapter would result in a significant hardship, such as in the case of a CAH in a rural area without sufficient Internet access.

(iii) In no case may a CAH be granted an exemption under this paragraph (a)(6) for more than 5 years.

(7) There is no administrative or judicial review under section s1869 and 1878 of the Actor otherwise of the following:

(i) The methodology and standards for determining the amount of payment under paragraph (a)(5) of this section, including the calculation of reasonable costs under § 495.106(c) of this chapter.

(ii) The methodology and standards for determining the amount of payment adjustments made under paragraph (a)(6).

(iii) The methodology and standards for determining a CAH to be a qualifying CAH under § 495.106 of this chapter.

(iv) The methodology and standards for determining if the hardship exemption applies to a CAH under paragraph (a)(6)(ii) of this section.

(v) The specification of the cost reporting periods, payment years, or fiscal years as applied under this paragraph.

* * * * *

PART 422—MEDICARE ADVANTAGE PROGRAM

■ 5. The authority citation for part 422 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart G—Payments to Medicare Advantage Organizations

■ 6. Section 422.304 is amended by adding a new paragraph (f) to read as follows:

§ 422.304 Monthly payments.

* * * * *

(f) *Separate payment for meaningful use of certified EHRs.* In the case of qualifying MA organizations, as defined in § 495.200 of this chapter, entitled to MA EHR incentive payments per § 495.220 of this chapter, such payments are made in accordance with sections 1853(l) and (m) of the Act and subpart C of Part 495 of this chapter.

■ 7. Section 422.306 is amended as follows:
■ A. Removing "and" from the end of paragraph (b)(2)(ii).
■ B. Removing the period at the end of paragraph (b)(2)(iii) and adding "; and" in its place.
■ C. Adding a new paragraph (b)(2)(iv).

The addition reads as follows:

§ 422.306 Annual MA capitation rates.

* * * * *

(b) * * *

(2) * * *

(iv) Adjusted to exclude costs attributable to payments under sections 1848(o) and 1886(n) of the Act of Medicare FFS incentive payments for meaningful use of electronic health records.

* * * * *

■ 8. Section 422.308 is amended as follows:
■ A. Redesignating paragraph (a) as paragraph (a)(1).
■ B. Adding a new paragraph (a)(2).

The addition reads as follows:

§ 422.308 Adjustments to capitation rates, benchmarks, bids, and payments.

* * * * *

(a) * * *

(2) The amount calculated in paragraph (a)(1) of this section must exclude expenditures attributable to sections 1848(a)(7) and (o) and sections 1886(b)(3)(B)(ix) and (n) of the Act.

* * * * *

■ 9. Section 422.322 is amended as follows:
■ A. Adding paragraph (a)(3).
■ B. Revising paragraph (b).

The addition and revision read as follows:

§ 422.322 Source of payment and effect of MA plan election on payment.

(a) * * *

(3) Payments under subpart C of part 495 of this chapter for meaningful use of certified EHR technology are made

from the Federal Hospital Insurance Trust Fund or the Supplementary Medical Insurance Trust Fund. In applying section 1848(o) of the Act under sections 1853(l) and 1886(n)(2)of the Act under section 1853(m) of the Act, CMS determines the amount to the extent feasible and practical to be similar to the estimated amount in the aggregate that would be payable for services furnished by professionals and hospitals under Parts B and A, respectively, under title XVIII of the Act.

(b) *Payments to the MA organization.* Subject to § 412.105(g), § 413.86(d), and § 495.204 of this chapter and §§ 422.109, 422.316, and 422.320, CMS' payments under a contract with an MA organization (described in § 422.304) with respect to an individual electing an MA plan offered by the organization are instead of the amounts which (in the absence of the contract) would otherwise be payable under original Medicare for items and services furnished to the individual.

* * * * *

SUBCHAPTER G—STANDARDS AND CERTIFICATIONS

■ 10. A new part 495 is added to read as follows:

PART 495—STANDARDS FOR THE ELECTRONIC HEALTH RECORD TECHNOLOGY INCENTIVE PROGRAM

Subpart A—General Provisions

Sec.

495.2 Basis and purpose.
495.4 Definitions.
495.6 Meaningful use objectives measures for EPs, eligible hospitals, and CAHs.
495.8 Demonstration of meaningful use criteria.
495.10 Participation requirements for EPs, eligible hospitals, and CAHs.

Subpart B—Requirements Specific to the Medicare Program

495.100 Definitions.
495.102 Incentive payments to EPs.
495.104 Incentive payments to eligible hospitals.
495.106 Incentive payments to CAHs.
495.108 Posting of required information.
495.110 Preclusion on administrative and judicial review.

Subpart C—Requirements Specific to Medicare Advantage (MA) Organizations

495.200 Definitions.
495.202 Identification of qualifying MA organizations, MA–EPs, and MA-affiliated eligible hospitals.
495.204 Incentive payments to qualifying MA organizations for MA–EPs and MA-affiliated eligible hospitals.
495.206 Timeframe for payment to qualifying MA organizations.
495.208 Avoiding duplicate payment.
495.210 Meaningful EHR user attestation.
495.212 Limitation on review.

Subpart D—Requirements Specific to the Medicaid Program

495.300 Basis and purpose.
495.302 Definitions.
495.304 Medicaid provider scope and eligibility.
495.306 Establishing patient volume.
495.308 Net average allowable costs as the basis for determining the incentive payment.
495.310 Medicaid provider incentive payments.
495.312 Process for payments.
495.314 Activities required to receive an incentive payment.
495.316 State monitoring and reporting regarding activities required to receive an incentive payment.
495.318 State responsibilities for receiving FFP.
495.320 FFP for payments to Medicaid providers.
495.322 FFP for reasonable administrative expenses.
495.324 Prior approval conditions.
495.326 Disallowance of FFP.
495.328 Request for reconsideration of adverse determination.
495.330 Termination of FFP for failure to provide access to information.
495.332 State Medicaid health information technology (HIT) plan requirements.
495.334 Reserved.
495.336 Health information technology planning advance planning document requirements (HIT PAPD).
495.338 Health information technology implementation advance planning document requirements (HIT IAPD).
495.340 As-needed HIT PAPD update and as-needed HIT IAPD update requirements.
495.342 Annual HIT IAPD requirements.
495.344 Approval of the State Medicaid HIT plan, the HIT PAPD and update, the HIT IAPD and update, and the annual HIT IAPD.
495.346 Access to systems and records.
495.348 Procurement standards.
495.350 State Medicaid agency attestations.
495.352 Reporting requirements.
495.354 Rules for charging equipment.
495.356 Nondiscrimination requirements.
495.358 Cost allocation plans.
495.360 Software and ownership rights.
495.362 Retroactive approval of FFP with an effective date of February 18, 2009.
495.364 Review and assessment of administrative activities and expenses of Medicaid provider health information technology adoption and operation.
495.366 Financial oversight and monitoring of expenditures.
495.368 Combating fraud and abuse.
495.370 Appeals process for a Medicaid provider receiving electronic health record incentive payments.

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart A—General Provisions

§ 495.2 Basis and purpose.

This part implements the following:

(a) Section 1848(o) of the Act by establishing payment incentives under Medicare Part B for eligible professionals who adopt and meaningfully use certified electronic health record (EHR) technology.

(b) Section 1853(1) of the Act to provide incentive payments to Medicare Advantage organizations for certain affiliated professionals who meaningfully use certified EHR technology and meet certain other requirements.

(c) Section 1886(n) of the Act by establishing incentives payments for the meaningful use of certified EHR technology by subsection (d) hospitals, as defined under section 1886(d)(1)(B) of the Act, participating in the Medicare FFS program.

(d) Section 1814(l) of the Act to provide an incentive payment to critical access hospitals that meaningfully use certified EHR technology based on the hospitals' reasonable costs.

(e) Section 1853(m) of the Act to provide incentive payments to MA organizations for certain affiliated hospitals that meaningfully use certified EHR technology.

(f) Sections 1903(a)(3)(F) and 1903(t) of the Act to provide 100 percent Federal financial participation (FFP) to States for incentive payments to certain eligible providers participating in the Medicaid program to purchase, implement, and operate (including support services and training for staff) certified EHR technology and 90 percent FFP for State administrative expenses related to such incentive payments.

(g) Sections 1848(a)(7), 1853(l)(4), 1886(b)(3)(B)(ix)(I), and 1853(m)(4) of the Act, providing for payment reductions for inpatient services furnished on or after October 1, 2014 to Medicare beneficiaries by hospitals that are not meaningful users of certified EHR technology, and for covered professional services furnished on or after January 1, 2015 to Medicare beneficiaries by certain professionals who are not meaningful users of certified EHR technology.

§ 495.4 Definitions.

In this part, unless otherwise indicated—

Certified electronic health record technology has the same definition as this term is defined at 45 CFR 170.102.

Critical access hospital (CAH) means a facility that has been certified as a critical access hospital under section 1820(e) of the Act and for which

Medicare payment is made under section 1814(l) of the Act for inpatient services and under section 1834(g) of the Act for outpatient services.

EHR reporting period means either of the following:

(1) For an eligible professional (EP)—

(i) For the first payment year, any continuous 90-day period within a calendar year;

(ii)(A) Except as specified in paragraph (1)(ii)(B) of this definition, for the second, third, fourth, fifth, or sixth payment year, the calendar year.

(B) For Medicaid providers who are demonstrating they are meaningful EHR users for the first time in their second payment year, the EHR reporting period during such second payment year is any continuous 90-day period within the calendar year.

(2) For an eligible hospital or a CAH—

(i) For the first payment year, any continuous 90-day period within a federal fiscal year; and

(ii)(A) Except as specified in paragraph (2)(ii)(B) of this definition, for the second, third, fourth, fifth, or sixth payment year, the Federal fiscal year.

(B) For Medicaid providers who are demonstrating they are meaningful EHR users for the first time in their second payment year, the EHR reporting period during such second payment year is any continuous 90-day period within the Federal fiscal year.

Eligible hospital means an eligible hospital as defined under § 495.100 or Medicaid eligible hospital under subpart D of this part.

Eligible professional (EP) means an eligible professional as defined under § 495.100 or a Medicaid eligible professional under subpart D of this part.

Hospital-based EP is an EP (as defined under this section) who furnishes 90 percent or more of his or her covered professional services in a hospital setting in the year preceding the payment year. For Medicare, this will be calculated based on the Federal FY prior to the payment year. For Medicaid, it is at the State's discretion if the data is gathered on the Federal FY or CY prior to the payment year. A setting is considered a hospital setting if it is a site of service that would be identified by the codes used in the HIPAA standard transactions as an inpatient hospital, or emergency room setting.

Meaningful EHR user means:

(1) Subject to paragraph (3) of this definition, an EP, eligible hospital or CAH that, for an EHR reporting period for a payment year, demonstrates in accordance with § 495.8 meaningful use of certified EHR technology by meeting the applicable objectives and associated measures under § 495.6; and

(2)(i) Except as specified in paragraph (2)(ii) of this definition, a Medicaid EP or Medicaid eligible hospital, that meets the requirements of paragraph (1) of this definition and any additional criteria for meaningful use imposed by the State and approved by CMS under § 495.316 and § 495.332.

(ii) An eligible hospital or CAH is deemed to be a meaningful EHR user for purposes of receiving an incentive payment under subpart D of this Part, if the hospital participates in both the Medicare and Medicaid EHR incentive programs, and the hospital meets the requirements of paragraph (1) of this definition.

(3) To be considered a meaningful EHR user, at least 50 percent of an EP's patient encounters during the EHR reporting period during the payment year must occur at a practice/location or practices/locations equipped with certified EHR technology.

Payment year means:

(1) For an EP, a calendar year beginning with CY 2011; and

(2) For a CAH or an eligible hospital, a Federal fiscal year beginning with FY 2011.

Qualified EHR has the same definition as this term is defined at 45 CFR 170.102.

First, second, third, fourth, fifth, or sixth payment years mean as follows:

(1) The first payment year is: with respect to an EP, the first calendar year for which the EP receives an incentive payment under this part; and with respect to an eligible hospital or CAH, the first FY for which the hospital receives an incentive payment under this part.

(2) The second, third, fourth, fifth, or sixth payment year is:

(i) With respect to a Medicare EP, the second, third, fourth or fifth successive CY immediately following the first payment year; and with respect to a Medicare eligible hospital or CAH, the second, third, or fourth successive Federal FY immediately following the first payment year. (Note: Medicare EPs are not eligible for a sixth payment year and Medicare eligible hospitals are not eligible for a fifth or sixth payment year.)

(ii)(A) With respect to a Medicaid EP, the second, third, fourth, fifth, or sixth CY for which the EP receives an incentive payment under subpart D, regardless of whether the year immediately follows the prior payment year; and

(B) With respect to a Medicaid eligible hospital, for years prior to FY 2017, the second, third, fourth, fifth, or sixth Federal FY for which the hospital receives an incentive payment under subpart D of this part, regardless of whether the year immediately follows the prior payment year. Beginning with FY 2017, payments to Medicaid eligible hospitals must be consecutive, and the hospital is not eligible for an incentive payment under subpart D of this part unless it received such incentive payment for the prior fiscal year.

§ 495.6 Meaningful use objectives and measures for EPs, eligible hospitals, and CAHs.

(a) *Stage 1 criteria for EPs*—(1) *General rule regarding Stage 1 criteria for meaningful use for EPs.* Except as specified in paragraphs (a)(2) and (a)(3) of this section, EPs must meet all objectives and associated measures of the Stage 1 criteria specified in paragraph (d) of this section and five objectives of the EP's choice from paragraph (e) of this section to meet the definition of a meaningful EHR user.

(2) *Exclusion for non-applicable objectives.* (i) An EP may exclude a particular objective contained in paragraphs (d) or (e) of this section, if the EP meets all of the following requirements:

(A) Must ensure that the objective in paragraph (d) or (e) of this section includes an option for the EP to attest that the objective is not applicable.

(B) Meets the criteria in the applicable objective that would permit the attestation.

(C) Attests.

(ii) An exclusion will reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply. For example, an EP that has an exclusion from one of the objectives in paragraph (e) of this section must meet four (and not five) objectives of the EP's choice from such paragraph to meet the definition of a meaningful EHR user.

(3) *Exception for Medicaid EPs who adopt, implement or upgrade in their first payment year.* For Medicaid EPs who adopt, implement, or upgrade certified EHR technology in their first payment year, the meaningful use objectives and associated measures of the Stage 1 criteria specified in paragraphs (d) and (e) apply beginning with the second payment year, and do not apply to the first payment year.

(b) *Stage 1 criteria for eligible hospitals and CAHs*—(1) *General rule regarding Stage 1 criteria for meaningful use for eligible hospitals or CAHs.* Except as specified in paragraphs (b)(2) and (b)(3) of this section, eligible hospitals and CAHs must meet all objectives and associated measures of

the Stage 1 criteria specified in paragraph (f) of this section and five objectives of the eligible hospital's or CAH's choice from paragraph (g) of this section to meet the definition of a meaningful EHR user.

(2) *Exclusions for nonapplicable objectives.* (i) An eligible hospital or CAH may exclude a particular objective that includes an option for exclusion contained in paragraphs (f) or (g) of this section, if the hospital meets all of the following requirements:

(A) The hospital meets the criteria in the applicable objective that would permit an exclusion.

(B) The hospital so attests.

(ii) An exclusion will reduce (by the number of exclusions received) the number of objectives that would otherwise apply. For example, an eligible hospital that is excluded from one of the objectives in paragraph (g) of this section must meet four (and not five) objectives of the hospital's choice from such paragraph to meet the definition of a meaningful EHR user.

(3) *Exception for Medicaid eligible hospitals that adopt, implement or upgrade in their first payment year.* For Medicaid eligible hospitals that adopt, implement, or upgrade certified EHR technology in their first payment year, the meaningful use objectives and associated measures of the Stage 1 criteria specified in paragraphs (f) and (g) of this section apply beginning with the second payment year, and do not apply to the first payment year.

(c) Many of the objective and associated measures in paragraphs (d) through (g) of this section rely on measures that count unique patients or actions.

(1) If a measure (or associated objective) in paragraphs (d) through (g) of this section references paragraph (c) of this section, then the measure may be calculated by reviewing only the actions for patients whose records are maintained using certified EHR technology. A patient's record is maintained using certified EHR technology if sufficient data was entered in the certified EHR technology to allow the record to be saved, and not rejected due to incomplete data.

(2) If the objective and associated measure does not reference this paragraph (c) of this section, then the measure must be calculated by reviewing all patient records, not just those maintained using certified EHR technology.

(d) *Stage 1 core criteria for EPs.* An EP must satisfy the following objectives and associated measures, except those objectives and associated measures for which an EP qualifies for an exclusion under paragraph (a)(2) of this section specified in this paragraph:

(1)(i) *Objective.* Use computerized provider order entry (CPOE) for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 30 percent of all unique patients with at least one medication in their medication list seen by the EP have at least one medication order entered using CPOE.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section* Any EP who writes fewer than 100 prescriptions during the EHR reporting period.

(2)(i) *Objective.* Implement drug-drug and drug-allergy interaction checks.

(ii) *Measure.* The EP has enabled this functionality for the entire EHR reporting period.

(3)(i) *Objective.* Maintain an up-to-date problem list of current and active diagnoses.

(ii) *Measure.* More than 80 percent of all unique patients seen by the EP have at least one entry or an indication that no problems are known for the patient recorded as structured data.

(4)(i) *Objective.* Generate and transmit permissible prescriptions electronically (eRx).

(ii) *Measure.* Subject to paragraph (c) of this section, more than 40 percent of all permissible prescriptions written by the EP are transmitted electronically using certified EHR technology.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section* Any EP who writes fewer than 100 prescriptions during the EHR reporting period.

(5)(i) *Objective.* Maintain active medication list.

(ii) *Measure.* More than 80 percent of all unique patients seen by the EP have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data.

(6)(i) *Objective.* Maintain active medication allergy list.

(ii) *Measure.* More than 80 percent of all unique patients seen by the EP have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data.

(7)(i) *Objective.* Record all of the following demographics:

(A) Preferred language.

(B) Gender.

(C) Race.

(D) Ethnicity.

(E) Date of birth.

(ii) *Measure.* More than 50 percent of all unique patients seen by the EP have demographics recorded as structured data.

(8)(i) *Objective.* Record and chart changes in the following vital signs:

(A) Height.

(B) Weight.

(C) Blood pressure.

(D) Calculate and display body mass index (BMI).

(E) Plot and display growth charts for children 2–20 years, including BMI.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all unique patients age 2 and over seen by the EP, height, weight and blood pressure are recorded as structured data.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* Any EP who either see no patients 2 years or older, or who believes that all three vital signs of height, weight, and blood pressure of their patients have no relevance to their scope of practice.

(9)(i) *Objective.* Record smoking status for patients 13 years old or older.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all unique patients 13 years old or older seen by the EP have smoking status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* Any EP who sees no patients 13 years or older.

(10)(i) *Objective.* Report ambulatory clinical quality measures to CMS or, in the case of Medicaid EPs, the States.

(ii) *Measure.* Subject to paragraph (c) of this section, successfully report to CMS (or, in the case of Medicaid EPs, the States) ambulatory clinical quality measures selected by CMS in the manner specified by CMS (or in the case of Medicaid EPs, the States).

(11)(i) *Objective.* Implement one clinical decision support rules relevant to specialty or high clinical priority along with the ability to track compliance with that rule.

(ii) *Measure.* Implement one clinical decision support rule.

(12)(i) *Objective.* Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, medication allergies) upon request.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all patients who request an electronic copy of their health information are provided it within 3 business days.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* Any EP that has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period.

(13)(i) *Objective.* Provide clinical summaries for patients for each office visit.

(ii) *Measure.* Subject to paragraph (c) of this section, clinical summaries

provided to patients for more than 50 percent of all office visits within 3 business days.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* Any EP who has no office visits during the EHR reporting period.

(14)(i) *Objective.* Capability to exchange key clinical information (for example, problem list, medication list, allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.

(15)(i) *Objective.* Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.

(ii) *Measure.* Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process.

(e) *Stage 1 menu set criteria for EPs.* An EP must meet five of the following objectives and associated measures, one of which must be either paragraph (e)(9) or (e)(10) of this section, except that the required number of objectives and associated measures is reduced by an EP's paragraph (a)(2) of this section exclusions specified in this paragraph:

(1)(i) *Objective.* Implement drug-formulary checks.

(ii) *Measure.* The EP has enabled this functionality and has access to at least one internal or external formulary for the entire EHR reporting period.

(2)(i) *Objective.* Incorporate clinical lab-test results into EHR as structured data.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 40 percent of all clinical lab tests results ordered by the EP during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* An EP who orders no lab tests whose results are either in a positive/negative or numeric format during the EHR reporting period.

(3)(i) *Objective.* Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

(ii) *Measure.* Subject to paragraph (c) of this section, generate at least one report listing patients of the EP with a specific condition.

(4)(i) *Objective.* Send reminders to patients per patient preference for preventive/follow-up care.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 20 percent of all patients 65 years or older or 5 years old or younger were sent an appropriate reminder during the EHR reporting period.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* An EP who has no patients 65 years old or older or 5 years old or younger with records maintained using certified EHR technology.

(5)(i) *Objective.* Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within 4 business days of the information being available to the EP.

(ii) *Measure.* At least 10 percent of all unique patients seen by the EP are provided timely (available to the patient within four business days of being updated in the certified EHR technology) electronic access to their health information subject to the EP's discretion to withhold certain information.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* Any EP that neither orders nor creates any of the information listed at 45 CFR 170.304(g) during the EHR reporting period.

(6)(i) *Objective.* Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate.

(ii) *Measure.* More than 10 percent of all unique patients seen by the EP are provided patient-specific education resources.

(7)(i) *Objective.* The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.

(ii) *Measure.* Subject to paragraph (c) of this section, the EP performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* An EP who was not the recipient of any transitions of care during the EHR reporting period.

(8)(i) *Objective.* The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral.

(ii) *Measure.* Subject to paragraph (c) of this section, the EP who transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals.

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* An EP who neither transfers a patient to another setting nor refers a patient to another provider during the EHR reporting period.

(9)(i) *Objective.* Capability to submit electronic data to immunization registries or immunization information systems and actual submission according to applicable law and practice.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP submits such information has the capacity to receive the information electronically).

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* An EP who administers no immunizations during the EHR reporting period or where no immunization registry has the capacity to receive the information electronically.

(10)(i) *Objective.* Capability to submit electronic syndromic surveillance data to public health agencies and actual submission according to applicable law and practice.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an EP submits such information has the capacity to receive the information electronically).

(iii) Exclusion in accordance with paragraph (a)(2) of this section. An EP who does not collect any reportable syndromic information on their patients during the EHR reporting period or does not submit such information to any public health agency that has the capacity to receive the information electronically.

(f) *Stage 1 core criteria for eligible hospitals or CAHs.* An eligible hospital or CAH must meet the following objectives and associated measures except those objectives and associated measures for which an eligible hospital or CAH qualifies for a paragraph (b)(2) of this section exclusion specified in this paragraph:

(1)(i) *Objective.* Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical

record per State, local, and professional guidelines.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 30 percent of all unique patients with at least one medication in their medication list admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE.

(2)(i) *Objective.* Implement drug-drug and drug-allergy interaction checks.

(ii) *Measure.* The eligible hospital or CAH has enabled this functionality for the entire EHR reporting period.

(3)(i) *Objective.* Maintain an up-to-date problem list of current and active diagnoses.

(ii) *Measure.* More than 80 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry or an indication that no problems are known for the patient recorded as structured data.

(4)(i) *Objective.* Maintain active medication list.

(ii) *Measure.* More than 80 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient is not currently prescribed any medication) recorded as structured data.

(5)(i) *Objective.* Maintain active medication allergy list.

(ii) *Measure.* More than 80 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one entry (or an indication that the patient has no known medication allergies) recorded as structured data.

(6)(i) *Objective.* Record all of the following demographics;

(A) Preferred language.

(B) Gender.

(C) Race.

(D) Ethnicity.

(E) Date of birth.

(F) Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.

(ii) *Measure.* More than 50 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data.

(7)(i) *Objective.* Record and chart changes in the following vital signs:

(A) Height.

(B) Weight.

(C) Blood pressure.

(D) Calculate and display body mass index (BMI).

(E) Plot and display growth charts for children 2–20 years, including BMI.

(ii) *Measure.* Subject to paragraph (c) of this section, for more than 50 percent of all unique patients age 2 and over admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23), height, weight, and blood pressure are recorded as structured data.

(8)(i) *Objective.* Record smoking for patients 13 years old or older.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all unique patients 13 years old or older or admitted to the eligible hospital's inpatient or emergency department (POS 21 or 23) have smoking status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* Any eligible hospital or CAH that admits no patients 13 years or older to their inpatient or emergency department (POS 21 or 23).

(9)(i) *Objective.* Report hospital clinical quality measures to CMS or, in the case of Medicaid eligible hospitals, the States.

(ii) *Measure.* Subject to paragraph (c) of this section, successfully report to CMS (or, in the case of Medicaid eligible hospitals or CAHs, the States) hospital clinical quality measures selected by CMS in the manner specified by CMS (or, in the case of Medicaid eligible hospitals or CAHs, the States).

(10)(i) *Objective.* Implement one clinical decision support rule related to a high priority hospital condition along with the ability to track compliance with that rule.

(ii) *Measure.* Implement one clinical decision support rule.

(11)(i) *Objective.* Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies, discharge summary, procedures), upon request.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all patients of the inpatient or emergency departments of the eligible hospital or CAH (POS 21 or 23) who request an electronic copy of their health information are provided it within 3 business days.

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* Any eligible hospital or CAH that has no requests from patients or their agents for an electronic copy of patient health information during the EHR reporting period.

(12)(i) *Objective.* Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all patients who are discharged from an eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) and who request an electronic copy of their discharge instructions are provided it.

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* Any eligible hospital or CAH that has no requests from patients or their agents for an electronic copy of the discharge instructions during the EHR reporting period.

(13)(i) *Objective.* Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to electronically exchange key clinical information.

(14)(i) *Objective.* Protect electronic health information created or maintained by the certified EHR technology through the implementation of appropriate technical capabilities.

(ii) *Measure.* Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1) and implement security updates as necessary and correct identified security deficiencies as part of its risk management process.

(g) *Stage 1 menu set criteria for eligible hospitals or CAHs.* Eligible hospitals or CAHs must meet five of the following objectives and associated measures, one which must be specified in paragraph (g)(8), (g)(9), or (g)(10) of this section, except that the required number of objectives and associated measures is reduced by a hospital's paragraph (b)(2) of this section exclusions specified in this paragraph:

(1)(i) *Objective.* Implement drug-formulary checks.

(ii) *Measure.* The eligible hospital or CAH has enabled this functionality and has access to at least one internal or external formulary for the entire EHR reporting period.

(2)(i) *Objective.* Record advance directives for patient 65 years old or older.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient (POS 21) have an indication of an advance directive status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* An eligible hospital or CAH that admits no

patients age 65 years old or older during the EHR reporting period.

(3)(i) *Objective.* Incorporate clinical lab-test results into EHR as structured data.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 40 percent of all clinical lab test results ordered by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in certified EHR technology as structured data.

(4)(i) *Objective.* Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

(ii) *Measure.* Subject to paragraph (c) of this section, generate at least one report listing patients of the eligible hospital or CAH with a specific condition.

(5)(i) *Objective.* Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate.

(ii) *Measure.* More than 10 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources.

(6)(i) *Objective.* The eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.

(ii) *Measure.* Subject to paragraph (c) of this section, the eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).

(7)(i) *Objective.* The eligible hospital or CAH that transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral.

(ii) *Measure.* Subject to paragraph (c) of this section, the eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals.

(8)(i) *Objective.* Capability to submit electronic data to immunization registries or immunization information systems and actual submission according to applicable law and practice.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the eligible hospital or CAH submits such information has the capacity to receive the information electronically).

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* An eligible hospital or CAH that administers no immunizations during the EHR reporting period or where no immunization registry has the capacity to receive the information electronically.

(9)(i) *Objective.* Capability to submit electronic data on reportable (as required by State or local law) lab results to public health agencies and actual submission according to applicable law and practice.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to provide electronic submission of reportable lab results to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible hospital or CAH submits such information has the capacity to receive the information electronically).

(iii) *Exclusion in accordance with paragraph (b)(2) of this section.* No public health agency to which the eligible hospital or CAH submits such information has the capacity to receive the information electronically.

(10)(i) *Objective.* Capability to submit electronic syndromic surveillance data to public health agencies and actual submission according to applicable law and practice.

(ii) *Measure.* Performed at least one test of certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies and follow-up submission if the test is successful (unless none of the public health agencies to which an eligible hospital or CAH submits information has the capacity to receive the information electronically).

(iii) *Exclusion in accordance with paragraph (a)(2) of this section.* No public health agency to which the eligible hospital or CAH submits information has the capacity to receive the information electronically.

(h) *Stage 2 criteria for EPs.* Beginning when final regulations for Stage 2 are effective, an EP must satisfy the following objectives and associated measures:

(1)(i) *Objective.* Use computerized provider order entry (CPOE) for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.

(ii) *Measure.* More than 60 percent of all unique patients with at least one medication in their medication list seen by the EP have at least one medication order entered using CPOE.

(iii) *Exclusion.* Any EP who writes fewer than 100 prescriptions during the EHR reporting period.

(2) [Reserved].

(i) *Stage 2 criteria for eligible hospitals or CAHs.* Beginning when final regulations for Stage 2 are effective, an eligible hospital or CAH must satisfy the following objectives and associated measures:

(1)(i) *Objective.* Use computerized provider order entry (CPOE) for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.

(ii) *Measure.* More than 60 percent of all unique patients with at least one medication in their medication list admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have at least one medication order entered using CPOE.

(2) [Reserved].

§ 495.8 Demonstration of meaningful use criteria.

(a) *Demonstration by EPs.* An EP must demonstrate that he or she satisfies each of the applicable objectives and associated measures under § 495.6 of this subpart as follows:

(1) For CY 2011—(i) *Attestation.* Attest, through a secure mechanism, in a manner specified by CMS (or for a Medicaid EP, in a manner specified by the State), that during the EHR reporting period, the EP—

(A) Used certified EHR technology, and specify the technology used;

(B) Satisfied the required objectives and associated measures under § 495.6(d) and § 495.6(e) of this subpart;

(C) Must specify the EHR reporting period and provide the result of each applicable measure for all patients seen during the EHR reporting period for which a selected measure is applicable;

(ii) *Additional requirements for Medicaid EPs.* For Medicaid EPs, if, in accordance with § 495.316 and § 495.332, CMS has approved a State's revised definition for meaningful use, in addition to meeting paragraphs (a)(1)(i) through (ii) of this section, the EP must

also demonstrate meeting the State revised definition using the method approved by CMS; and

(iii) *Exception for Medicaid EPs.* If a Medicaid EP has adopted, implemented or upgraded certified EHR technology in the first payment year, the EP need not demonstrate meaningful use until the second payment year, as described in § 495.6 and § 495.8 of this subpart.

(2) For CY 2012 and subsequent years—

(i) *Attestation.* Attest, through a secure mechanism, in a manner specified by CMS (or for a Medicaid EP, in a manner specified by the State) that during the EHR reporting period, the EP—

(A) Used certified EHR technology and specify the technology used.

(B) Satisfied the required objectives and associated measures under § 495.6(d) and § 495.6(e), except § 495.6(d)(10) "Report ambulatory clinical quality measures to CMS or, in the case of Medicaid EPs, the States."

(C) Must specify the EHR reporting period and provide the result of each applicable measure for all patients seen during the EHR reporting period for which a selected measure is applicable.

(ii) *Reporting of clinical quality information.* For § 495.6(d)(10), "Report ambulatory clinical quality measures to CMS or, in the case of Medicaid EPs, the States," report the ambulatory clinical quality measures selected by CMS electronically to CMS (or in the case of Medicaid EPs, the States) in the manner specified by CMS (or in the case of Medicaid EPs, the States).

(iii) *Additional requirements for Medicaid EPs.* For Medicaid EPs, if, in accordance with § 495.316 and § 495.332, CMS has approved a State's additional criteria for meaningful use, in addition to meeting paragraphs (a)(2)(i) through (iii), the EP must also demonstrate meeting such additional criteria using the method approved by CMS.

(iv) *Exception for Medicaid EPs.* If a Medicaid EP has adopted, implemented, or upgrade certified EHR technology in the first payment year, the EP need not demonstrate that it is a meaningful EHR user until the second payment year, as described in § 495.6 and § 495.8 of this subpart.

(3) For all CYs, an EP who practices in multiple physical locations, not all of which have certified EHR technology available, will demonstrate meaningful use using only the locations where the EP has certified EHR technology available. (See also § 495.4 regarding the definition of meaningful EHR user).

(b) *Demonstration by eligible hospitals and CAHs.* To successfully demonstrate that it is a meaningful EHR user, an eligible hospital or CAH must the following requirements:

(1) For FY 2011—

(i) *Attestation.* Attest, through a secure mechanism, in a manner specified by CMS (or for a Medicaid eligible hospital, in a manner specified by the State), that during the EHR reporting period, the eligible hospital or CAH—

(A) Used certified EHR and specify the technology used.

(B) Satisfied the required objectives and associated measures under § 495.6(f) and § 495.6(g).

(C) Must specify the EHR reporting period and provide the result of each applicable measure for all patients admitted to the inpatient or emergency department (POS 21 or 23) of the hospital during the EHR reporting period for which a selected measure is applicable.

(ii) *Additional requirements for Medicaid eligible hospitals.* For Medicaid eligible hospitals, if, in accordance with § 495.316 and § 495.332, CMS has approved a State's revised definition for meaningful use, in addition to meeting paragraphs (b)(1)(i) through (ii) of this section, the eligible hospital must also demonstrate meeting the State's revised definition using the method approved by CMS.

(iv) *Exception for Medicaid eligible hospitals.* If a Medicaid eligible hospital has adopted, implemented or upgraded certified EHR technology in the first payment year, the eligible hospital need not demonstrate meaningful use until the second payment year, as described in § 495.6 and § 495.8 of this subpart.

(2) For FY 2012 and subsequent years—

(i) *Attestation.* Attest, through a secure mechanism, in a manner specified by CMS (or for a Medicaid eligible hospital, in a manner specified by the State), that during the EHR reporting period, the eligible hospital or CAH—

(A) Used certified EHR and specify the technology used;

(B) Satisfied the required objectives and associated measures under § 495.6(f) and § 495.6(g), except § 495.6(f)(9) "Report hospital clinical quality measures to CMS or, in the case of Medicaid eligible hospitals, the States;"

(C) Must specify the EHR reporting period and provide the result of each applicable measure for all patients admitted to the inpatient or emergency department (POS 21 or 23) of the hospital during the EHR reporting period for which a selected measure is applicable.

(ii) *Reporting clinical quality information.* For § 495.6(f)(9) "Report hospital clinical quality measures to CMS or, in the case of Medicaid eligible hospitals, the States," report the hospital quality measures selected by CMS electronically to CMS (or in the case of Medicaid eligible hospitals, the States), in the manner specified by CMS (or in the case of Medicaid eligible hospitals, the States).

(iv) *Additional requirements for Medicaid eligible hospitals.* For Medicaid eligible hospitals if, in accordance with § 495.316 and § 495.332, CMS has approved a State's revised definition for meaningful use, in addition to meeting paragraphs (b)(2)(i) through (iii) of this section, the eligible hospital must also demonstrate meeting the State's revised definition using the method approved by CMS.

(v) *Exception for Medicaid eligible hospitals.* If a Medicaid eligible hospital has adopted, implemented, or upgraded certified EHR technology in the first payment year, the eligible hospital need not demonstrate that it is a meaningful EHR user until the second payment year, as described in § 495.6 and § 495.8 of this subpart.

(c) *Review of meaningful use.* (1) CMS (and in the case of Medicaid EPs and eligible hospitals, States) may review an EP, eligible hospital or CAH's demonstration of meaningful use.

(2) All EPs, eligible hospitals, and CAHs must keep documentation supporting their demonstration of meaningful use for 6 years.

§ 495.10 Participation requirements for EPs, eligible hospitals, and CAHs.

(a) An eligible hospital, CAH or EP must submit in a manner specified by CMS the following information in the first payment year:

(1) Name of the EP, eligible hospital or CAH.

(2) National Provider Identifier (NPI).

(3) Business address and phone number.

(4) Such other information as specified by CMS.

(b) In addition to the information submitted under paragraph (a) of this section, an eligible hospital or CAH, must, in the first payment year, submit in a manner specified by CMS its CMS Certification Number (CCN) and its Taxpayer Identification Number (TIN).

(c) Subject to paragraph (f) of this section, in addition to the information submitted under paragraph (a) of this section, an EP must submit in a manner specified by CMS, the Taxpayer Identification Number (TIN) which may be the EP's Social Security Number

(SSN) to which the EP's incentive payment should be made.

(d) In the event the information specified in paragraphs (a) through (c) of this section as previously submitted to CMS is no longer accurate, the EP, eligible hospital or CAH must provide updated information to CMS or the State on a timely basis in the manner specified by CMS or the State.

(e) An EP that qualifies as both a Medicaid EP and Medicare EP—

(1) Must notify CMS in the manner specified by CMS as to whether he or she elects to participate in the Medicare or the Medicaid EHR incentive program;

(2) After receiving at least one EHR incentive payment, may switch between the two EHR incentive programs only one time, and only for a payment year before 2015;

(3) Must, for each payment year, meet all of the applicable requirements, including applicable patient volume requirements, for the program in which he or she chooses to participate (Medicare or Medicaid);

(4) Is limited to receiving, in total, the maximum payments the EP would receive under the Medicaid EHR program, as described in subpart D of this part; and

(5) Is placed in the payment year the EP would have been in had the EP begun in and remained in the program to which he or she has switched. For example, an EP that begins receiving Medicaid incentive payments in 2011, and then switches to the Medicare program for 2012, is in his or her second payment year in 2012.

(f) *Limitations on incentive payment reassignments.* (1) EPs are permitted to reassign their incentive payments to their employer or to an entity with which they have a contractual arrangement allowing the employer or entity to bill and receive payment for the EP's covered professional services.

(2)(i) Assignments in Medicare must be consistent with Section 1842(b)(6)(A) of the Act and 42 CFR part 424 subpart F.

(ii) Medicaid EPs may also assign their incentive payments to a TIN for an entity promoting the adoption of EHR technology, consistent with subpart D of this part.

(3) Each EP may reassign the entire amount of the incentive payment to only one employer or entity.

Subpart B—Requirements Specific to the Medicare Program

§ 495.100 Definitions.

In this subpart unless otherwise indicated—

Covered professional services means (as specified in section 1848(k)(3) of the Act) services furnished by an EP for which payment is made under, or is based on, the Medicare physician fee schedule.

Eligible hospital means a hospital subject to the prospective payment system specified in § 412.1(a)(1) of this chapter, excluding those hospitals specified in § 412.23 of this chapter, and excluding those hospital units specified in § 412.25 of this chapter.

Eligible professional (EP) means a physician as defined in section 1861(r) of the Act, which includes, with certain limitations, all of the following types of professionals:

(1) A doctor of medicine or osteopathy.

(2) A doctor of dental surgery or medicine.

(3) A doctor of podiatric medicine.

(4) A doctor of optometry.

(5) A chiropractor.

Geographic health professional shortage area (HPSA) means a geographic area that is designated by the Secretary under section 332(a)(1)(A) of the PHS Act as of December 31 of the year prior to the payment year as having a shortage of health professionals.

Qualifying CAH means a CAH that is a meaningful EHR user for the EHR reporting period for a cost reporting period beginning during a payment year.

Qualifying eligible professional (qualifying EP) means an EP who is a meaningful EHR user for the EHR reporting period for a payment year and who is not a hospital-based EP, as determined for that payment year.

Qualifying hospital means an eligible hospital that is a meaningful EHR user for the EHR reporting period for a payment year.

§ 495.102 Incentive payments to EPs.

(a) *General rules.* (1) Subject to paragraph (b) of this section, in addition to the amount otherwise paid under section 1848 of the Act, there must be paid to a qualifying EP (or to an employer or entity in the cases described in section 1842(b)(6)(A) of the Act) for a payment year an amount equal to 75 percent of the estimated allowed charges for covered professional services furnished by the EP during the payment year.

(2) For purposes of this paragraph (a) of this section, the estimated allowed charges for the qualifying EP's covered professional services during the payment year are determined based on claims submitted no later than 2 months after the end of the payment year, and, in the case of a qualifying EP who furnishes covered professional services in more than one practice, are determined based on claims submitted for the EP's covered professional services across all such practices.

(b) *Limitations on amounts of incentive payments.*

(1) Except as otherwise provided in paragraphs (b)(2) and (c) of this section, the amount of the incentive payment under paragraph (a) of this section for each payment year is limited to the following amounts:

(i) For the first payment year, $15,000 (or, if the first payment year for such qualifying EP is 2011 or 2012, $18,000).

(ii) For the second payment year, $12,000.

(iii) For the third payment year, $8,000.

(iv) For the fourth payment year, $4,000.

(v) For the fifth payment year, $2,000.

(vi) For any succeeding payment year for such professional, $0.

(2)(i) If the first payment year for a qualifying EP is 2014, then the payment limit for a payment year for the qualifying EP is the same as the amount specified in paragraph (b)(1) of this section for such payment year for a qualifying EP whose first payment year is 2013.

(ii) If the first payment year for a qualifying EP is after 2014, then the payment limit specified in this paragraph for such EP for such year and any subsequent year is $0.

(c) *Increase in incentive payment limit for EPs who predominantly furnish services in a geographic HPSA.* In the case of a qualifying EP who in the year prior to the payment year furnishes more than 50 percent of his or her covered professional services in a geographic HPSA that is designated as of December 31 of such year, the incentive payment limit determined under paragraph (b) of this section is to be increased by 10 percent.

(d) *Payment adjustment effective in CY 2015 and subsequent years for nonqualifying EPs.*

(1) Subject to paragraph (d)(3) of this section, beginning in 2015, for covered professional services furnished by an EP who is not a qualifying EP or a hospital-based EP for the year, the payment amount for such services is equal the product of the applicable percent specified in paragraph (d)(2) of this section and the Medicare physician fee schedule amount for such services.

(2) *Applicable percent.* Applicable percent is as follows:

(i) For 2015, 99 percent if the EP is not subject to the payment adjustment for an EP who is not a successful electronic prescriber under section 1848(a)(5) of the Act, or 98 percent if the EP is subject to the payment adjustment

for an EP who is not a successful electronic prescriber under section 1848(a)(5) of the Act).

(ii) For 2016, 98 percent.

(iii) For 2017 and each subsequent year, 97 percent.

(3) *Significant hardship exception.* (i) The Secretary may, on a case-by-case basis, exempt an EP who is not a qualifying EP from the application of the payment adjustment under paragraph (d)(1) of this section if the Secretary determines that compliance with the requirement for being a meaningful EHR user would result in a significant hardship for the EP.

(ii) The Secretary's determination to grant an EP an exemption under paragraph (d)(3)(i) of this section may be renewed on an annual basis, provided that in no case may an EP be granted an exemption under paragraph (d)(3)(i) of this section for more than 5 years.

§ 495.104 Incentive payments to eligible hospitals.

(a) *General rule.* A qualifying hospital (as defined in this subpart) must receive the special incentive payment as determined under the formulas described in paragraph (c) of this section for the period specified in paragraph (b) of this section.

(b) *Transition periods.* Subject to paragraph (d) of this section and the payment formula specified in paragraph (c) of this section, qualifying hospitals may receive incentive payments during transition periods which comprise the following fiscal years:

(1) Hospitals whose first payment year is FY 2011 may receive such payments for FYs 2011 through 2014.

(2) Hospitals whose first payment year is FY 2012 may receive such payments for FYs 2012 through 2015.

(3) Hospitals whose first payment year is FY 2013 may receive such payments for FYs 2013 through 2016.

(4) Hospitals whose first payment year is FY 2014 may receive such payments for FY 2014 through 2016.

(5) Hospitals whose first payment year is FY 2015 may receive such payments for FY 2015 through 2016.

(c) *Payment methodology.* (1) The incentive payment for each payment year is calculated as the product of the following:

(i) The initial amount determined under paragraph (c)(3) of this section.

(ii) The Medicare share fraction determined under paragraph (c)(4) of this section.

(iii) The transition factor determined under paragraph (c)(5) of this section.

(2) *Interim and final payments.* CMS uses data on hospital acute care inpatient discharges, Medicare Part A acute care inpatient-bed-days, Medicare Part C acute care inpatient-bed-days, and total acute care inpatient-bed-days, from the latest submitted 12-month hospital cost report as the basis for making preliminary incentive payments. Final payments are determined at the time of settling the first 12-month hospital cost report for the hospital fiscal year that begins on or after the first day of the payment year, and settled on the basis of data from that cost reporting period.

(3) *Initial amount.* The initial amount is equal to one of the following:

(i) For each hospital with 1,149 acute care inpatient discharges or fewer, $2,000,000.

(ii) For each hospital with at least 1,150 but no more than 23,000 acute care inpatient discharges, $2,000,000 + [$200 × (n − 1,149)], where n is the number of discharges for the hospital.

(iii) For each hospital with more than 23,000 acute care inpatient discharges, $6,370,200.

(4) *Medicare share fraction*—(i) *General.* (A) CMS determines the Medicare share fraction for an eligible hospital by using the number of Medicare Part A, Medicare Part C, and total acute care inpatient-bed-days using data from the Medicare cost report as specified by CMS.

(B) CMS computes the denominator of the Medicare share fraction using the charity care charges reported on the hospital's Medicare cost report.

(ii) The Medicare share fraction is the ratio of—

(A) A numerator which is the sum of—

(*1*) The number of inpatient-bed-days which are attributable to individuals with respect to whom payment may be made under Part A, including individuals enrolled in section 1876 Medicare cost plans; and

(*2*) The number of inpatient-bed-days which are attributable to individuals who are enrolled with a Medicare Advantage organization (as defined in § 422.2 of this chapter).

(B) A denominator which is the product of—

(1) The total number of acute care inpatient-bed-days; and

(2) The total amount of the eligible hospital's charges, not including any charges that are attributable to charity care, divided by the estimated total amount of the hospitals charges.

(5) *Transition factor.* For purposes of the payment formula, the transition factor is as follows:

(i) For hospitals whose first payment year is FY 2011—

(A) 1 for FY 2011;

(B) ¾ for FY 2012;

(C) ½ for FY 2013; and

(D) ¼ for FY 2014.

(ii) For hospitals whose first payment year is FY 2012—

(A) 1 for FY 2012;

(B) ¾ for FY 2013;

(C) ½ for FY 2014; and

(D) ¼ for FY 2015;

(iii) For hospitals whose first payment year is FY 2013—

(A) 1 for FY 2013;

(B) ¾ for FY 2014;

(C) ½ for FY 2015; and

(D) ¼ for FY 2016.

(iv) For hospitals whose first payment year is FY 2014—

(A) ¾ for FY 2014;

(B) ½ for FY 2015; and

(C) ¼ for FY 2016.

(v) For hospitals whose first payment year is FY 2015—

(A) ½ for FY 2015; and

(B) ¼ for FY 2016.

(d) No incentive payment for nonqualifying hospitals. After the first payment year, an eligible hospital will not receive an incentive payment for any payment year during which it is not a qualifying hospital.

§ 495.106 Incentive payments to CAHs.

(a) *Definitions.* In this section, unless otherwise indicated—

Payment year means a Federal fiscal year beginning after FY 2010 but before FY 2016.

Qualifying CAH means a CAH that would meet the definition of a meaningful EHR user at § 495.4, if it were an eligible hospital.

Reasonable costs incurred for the purchase of certified EHR technology for a qualifying CAH means the reasonable acquisition costs incurred for the purchase of depreciable assets as described in part 413 subpart G of this chapter, such as computers and associated hardware and software, necessary to administer certified EHR technology as defined in § 495.4, excluding any depreciation and interest expenses associated with the acquisition.

(b) *General rule.* A qualifying CAH receives an incentive payment for its reasonable costs incurred for the purchase of certified EHR technology, as defined in paragraph (a) of this section, in the manner described in paragraph (c) of this section for a cost reporting period beginning during a payment year as defined in paragraph (a) of this section.

(c) *Payment methodology.* (1) *Payment amount.* A qualifying CAH receives an incentive payment amount equal to the product of its reasonable costs incurred for the purchase of certified EHR technology and the Medicare share percentage.

(2) *Calculation of reasonable costs.* CMS or its Medicare contractor computes a qualifying CAH's reasonable costs incurred for the purchase of certified EHR technology, as defined in paragraph (a) of this section, as the sum of—

(i) The reasonable costs incurred for the purchase of certified EHR technology during the cost reporting period that begins in a payment year; and

(ii) Any reasonable costs incurred for the purchase of certified EHR technology in cost reporting periods beginning in years prior to the payment year which have not been fully depreciated as of the cost reporting period beginning in the payment year.

(3) *Medicare share percentage.* Notwithstanding the percentage applicable under § 413.70(a)(1) of this chapter, the Medicare share percentage equals the lesser of—

(i) 100 percent; or

(ii) The sum of the Medicare share fraction for the CAH as calculated under § 495.104(c)(4) of this subpart and 20 percentage points.

(d) *Incentive payments made to CAHs.* (1) The amount of the incentive payment made to a qualifying CAH under this section represents the expensing and payment of the reasonable costs computed in paragraph (c) of this section in a single payment year and, as specified in § 413.70(a)(5) of this chapter, such payment is made in lieu of payment that would have been made under § 413.70(a)(1) of this chapter for the reasonable costs of the purchase of certified EHR technology including depreciation and interest expenses associated with the acquisition.

(2) The amount of the incentive payment made to a qualifying CAH under this section is paid through a prompt interim payment for the applicable payment year after—

(i) The CAH submits the necessary documentation, as specified by CMS or its Medicare contractors, to support the computation of the incentive payment amount under this section; and

(ii) CMS or its Medicare contractor reviews such documentation and determines the interim amount of the incentive payment.

(3) The interim incentive payment made under this paragraph is subject to a reconciliation process as specified by CMS and the final incentive payment as determined by CMS or its Medicare contractor is considered payment in full for the reasonable costs incurred for the purchase of certified EHR technology in a single payment year.

(4) In no case may an incentive payment be made with respect to a cost reporting period beginning during a payment year before FY 2011 or after FY 2015 and in no case may a CAH receive an incentive payment under this section with respect to more than 4 consecutive payment years.

(e) *Reductions in payment to CAHs.* For cost reporting periods beginning in FY 2015, if a CAH is not a qualifying CAH for a payment year, then the payment for inpatient services furnished by a CAH under § 413.70(a) of this chapter is adjusted by the applicable percentage described in § 413.70(a)(6) of this chapter unless otherwise exempt from such adjustment.

(f) *Administrative or judicial review.* There is no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of the—

(1) Methodology and standards for determining the amount of payment, the reasonable cost, and adjustments described in this section including selection of periods for determining, and making estimates or using proxies of, inpatient-bed-days, hospital charges, charity charges, and the Medicare share percentage as described in this section;

(2) Methodology and standards for determining if a CAH is a qualifying CAH under this section;

(3) Specification of EHR reporting periods, cost reporting periods, payment years, and fiscal years used to compute the CAH incentive payment as specified in this section; and

(4) Identification of the reasonable costs used to compute the CAH incentive payment under paragraph (c) of this section including any reconciliation of the CAH incentive payment amount made under paragraph (d) of this section.

§ 495.108 Posting of required information.

(a) CMS posts, on its Internet Web site, the following information regarding EPs, eligible hospitals, and CAHs receiving an incentive payment under subparts B and C of this part:

(1) Name.

(2) Business addressee.

(3) Business phone number.

(4) Such other information as specified by CMS.

(b) CMS posts, on its Internet Web site, the following information for qualifying MA organizations that receive an incentive payment under subpart C of this part—

(1) The information specified in paragraph (a) of this section for each of the qualifying MA organization's MA plan information; and

(2) The information specified in paragraph (a) of this section for each of the qualifying MA organization's MA EPs and MA-affiliated eligible hospitals.

§ 495.110 Preclusion on administrative and judicial review.

There is no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of the following:

(a) For EPs—

(1) The methodology and standards for determining EP incentive payment amounts;

(2) The methodology and standards for determining the payment adjustments that apply to EPs beginning with 2015;

(3) The methodology and standards for determining whether an EP is a meaningful EHR user, including—

(i) The selection of clinical quality measures; and

(ii) The means of demonstrating meaningful EHR use.

(4) The methodology and standards for determining the hardship exception to the payment adjustments;

(5) The methodology and standards for determining whether an EP is hospital-based; and

(6) The specification of the EHR reporting period, as well as whether payment will be made only once, in a single consolidated payment, or in periodic installments.

(b) For eligible hospitals—

(1) The methodology and standards for determining the incentive payment amounts made to eligible hospitals, including—

(i) The estimates or proxies for determining discharges, inpatient-bed-days, hospital charges, charity charges, and Medicare share; and

(ii) The period used to determine such estimate or proxy;

(2) The methodology and standards for determining the payment adjustments that apply to eligible hospitals beginning with FY 2015;

(3) The methodology and standards for determining whether an eligible hospital is a meaningful EHR user, including—

(i) The selection of clinical quality measures; and

(ii) The means of demonstrating meaningful EHR use.

(4) The methodology and standards for determining the hardship exception to the payment adjustments; and

(5) The specification of the EHR reporting period, as well as whether payment will be made only once, in a single consolidated payment, or in periodic installments.

Subpart C—Requirements Specific to Medicare Advantage (MA) Organizations

§ 495.200 Definitions.

As used in this subpart:

First payment year means with respect to—

(1) Covered professional services furnished by a qualifying MA EP, the first calendar year for which an incentive payment is made for such services under this subsection to a qualifying MA organization.

(2) Qualifying MA-affiliated eligible hospitals, the first fiscal year for which an incentive payment is made for qualifying MA-affiliated eligible hospitals under this section to a qualifying MA organization.

Inpatient-bed-days is defined in the same manner and is used in the same manner as that term is defined and used for purposes of implementing section 4201(a) of the American Recovery and Reinvestment Act of 2009 with respect to the Medicare FFS hospital EHR incentive program in § 495.104 of this part.

Patient care services means health care services for which payment would be made under, or for which payment would be based on, the fee schedule established under Medicare Part B if they were furnished by an EP to a Medicare beneficiary.

Payment year means—

(1) For a qualifying MA EP, a calendar year (CY) beginning with CY 2011 and ending with CY 2016; and

(2) For an eligible hospital, a Federal fiscal year (FY) beginning with FY 2011 and ending with FY 2016.

Qualifying MA-affiliated eligible hospital means an eligible hospital under section 1886(n)(6) of the Act that is under common corporate governance with a qualifying MA organization, for which at least two thirds of the Medicare hospital discharges (or bed-days) are of (or for) Medicare individuals enrolled under MA plans, and that is a meaningful user of certified EHR technology as defined by § 495.4 of this part. In the case of a hospital for which at least one-third of whose Medicare bed-days for the year are covered under Part A rather than Part C, payment for that payment year must only be made under section 1886(n) of the Act and not under this section.

Qualifying MA EP means all of the following:

(1) A physician (as described in section 1861(r) of the Act), including a doctor of medicine or osteopathy who is either of the following:

(i) Employed by a qualifying MA organization.

(ii) Employed by, or is a partner of, an entity that through a contract with a qualifying MA organization furnishes at least 80 percent of the entity's Medicare patient care services to enrollees of such organization.

(2) Furnishes at least 80 percent of his or her professional services covered under Title XVIII to enrollees of the qualifying MA organization.

(3) Furnishes, on average, at least 20 hours per week of patient care services to enrollees of the qualifying MA organization during the EHR reporting period.

(4) Is a meaningful user of certified EHR technology in accordance with § 495.4 of this part.

(5) Is not a "hospital-based EP" as that term is defined in § 495.4 of this Part.

Qualifying MA organization means a MA organization that is organized as a health maintenance organization (HMO) as defined in section 2791(b)(3) of the Public Health Service (PHS) Act which includes a Federally qualified HMO, an organization recognized as an HMO under State law, or a similar organization regulated for solvency under State law in the same manner and to the same extent as an HMO.

Second, third, fourth, and fifth payment year means with respect to incentive payments for qualifying—

(1) MA EPs to a qualifying MA organization, each successive calendar year immediately following the first payment year for the qualifying MA organization. The first payment year and each successive year immediately following the first payment year, for the qualifying MA organizations, through 2016, is the same for all qualifying MA EPs with respect to any specific qualifying MA organization.

(2) MA-affiliated eligible hospitals to a qualifying MA organization, each successive fiscal year immediately following the first payment year for the qualifying MA organization.

Under common corporate governance means that a qualifying MA organization and a qualifying MA-affiliated eligible hospital have a common parent corporation, that one is a subsidiary of the other, or that the organization and the hospital have a common board of directors.

§ 495.202 Identification of qualifying MA organizations, MA–EPs and MA-affiliated eligible hospitals.

(a) *Identification of qualifying MA organizations.* (1) Beginning with bids due in June 2011 (for plan year 2012), MA organizations seeking reimbursement for qualifying MA EPs and qualifying MA-affiliated eligible hospitals under the MA EHR incentive program are required to identify themselves to CMS in a form and manner specified by CMS, as part of submissions of initial bids under section 1854(a)(1)(A) of the Act.

(2) Qualifying MA organizations offering MA HMO plans, absent evidence to the contrary, are deemed to meet the definition of HMO in 42 U.S.C. 300gg–91(b)(3)—section 2791(b)(3) of the PHS Act.

(3) Qualifying MA organizations offering MA plan types other than HMOs, must attest to the fact that they meet the definition of HMO in 42 U.S.C. 300gg–91(b)(3)—section 2791(b)(3) of the PHS Act.

(4) Beginning with bids due in June 2014 (for plan year 2015), all MA organizations with potentially qualifying MA EPs or potentially qualifying MA-affiliated eligible hospitals under the MA EHR incentive program must identify themselves to CMS in a form and manner specified by CMS, as part of submissions of initial bids under section 1854(a)(1)(A) of the Act. "Potentially qualifying MA EPs" and "potentially qualifying MA-affiliated eligible hospitals" are those EPs and hospitals that meet the respective definitions of "qualifying MA EP" and "qualifying MA-affiliated eligible hospital" in § 495.200 but who (or which) are not meaningful users of certified EHR technology.

(b) *Identification of qualifying MA EPs and qualifying MA-affiliated eligible hospitals.*

(1) A qualifying MA organization, as part of its initial bid starting with plan year 2012, must make a preliminary identification of potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals for which the organization is seeking incentive payments for the current plan year.

(2) A qualifying MA organization must provide CMS with the following for each MA EP or eligible hospital when reporting under either paragraph (b)(1) or (b)(3) of this section:

(i) The MA EP's or MA-affiliated eligible hospital's name.

(ii) The address of the MA EP's practice or MA-affiliated eligible hospital's location.

(iii) NPI.

(iv) An attestation by MA organization specifying that the MA EP or MA-affiliated eligible hospital meets the eligibility criteria.

(3) Final identification of potentially qualifying MA EP or MA-affiliated eligible hospital must be made within 60 days of the close of the payment year as defined in § 495.200 for which MA EHR incentive payments are being sought.

(4) Beginning plan year 2015 and for subsequent plan years, all qualifying MA organizations, as part of their initial bids in June for the following plan year must—

(i) Identify potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals;

(ii) Include information specified in paragraph (b)(2)(i)(A) through (C) of this section for each professional and hospital.

(iii) Include an attestation that each professional and hospital either meets or does not meet the EHR incentive payment eligibility criteria.

§ 495.204 Incentive payments to qualifying MA organizations for MA–EPs and MA-affiliated eligible hospitals.

(a) *General rule.* A qualifying MA organization receives an incentive payment for its qualifying MA–EPs and its qualifying MA-eligible hospitals. The incentive payment amount paid to a qualifying MA organization for a—

(1) Qualifying MA–EP is the amount determined under paragraph (b) of this section; and

(2) Qualifying MA-eligible hospital is the amount determined under paragraph (c) of this section.

(b) *Amount payable to qualifying MA organization for qualifying MA EPs.*

(1) CMS substitutes an amount determined to be equivalent to the amount computed under § 495.102 of this part.

(2) The qualifying MA organization must report to CMS within 60 days of the close of the calendar year, the aggregate annual amount of revenue attributable to providing services that would otherwise be covered as professional services under Part B received by each qualifying MA EP for enrollees in MA plans of the MA organization in the payment year.

(3) CMS calculates the incentive amount for the MA organization for each qualifying MA EP as an amount equal to 75 percent of the reported annual revenue specified in paragraph (b)(2) of this section, up to the maximum amounts specified under section 1848(o)(1)(B) of the Act.

(4) For qualifying MA EPs who are compensated on a salaried basis, CMS requires the qualifying MA organization to develop a methodology for estimating the portion of each qualifying MA EP's salary attributable to providing services that would otherwise be covered as professional services under Part B to MA plan enrollees of the MA organization in the payment year. The methodology—

(i) Must be approved by CMS; and

(ii) May include an additional amount related to overhead, where appropriate, estimated to account for the MA-enrollee related Part B practice costs of the salaried qualifying MA EP.

(iii) Methodological proposals must be submitted to CMS by June of the payment year and must be auditable by an independent third-party. CMS will review and approve or disapprove such proposals in a timely manner.

(5) For qualifying MA EPs who are not salaried, qualifying MA organizations may obtain attestations from such qualifying MA EPs (or from entities that the MA EPs are employed by or with which they have a partnership interest) as to the amount of compensation received by such EPs for MA plan enrollees of the MA organization. The organizations may submit to CMS compensation information for each such MA EP based on such attestations.

(6) For qualifying MA EPs who are not salaried, qualified MA organizations may have qualifying MA EPs (or from entities that the MA EPs are employed by or with which they have a partnership interest) send MA organization compensation information directly to CMS. CMS will use the information provided in this subparagraph or paragraph (b)(5) of this section for no other purpose than to compute the amount of EHR incentive payment due the MA organization.

(c) *Amount payable to qualifying MA organization for qualifying MA-affiliated eligible hospitals.* (1)(i) CMS substitutes an amount determined to be equivalent to the amount computed under § 495.104, to the extent data are not available to compute payments for qualifying MA-affiliated eligible hospitals under the Medicare FFS EHR hospital incentive program.

(ii) CMS uses the same methodology and defines "inpatient-bed-days"and other terms as used under the Medicare FFS EHR hospital incentive program in § 495.104 of this part in computing amounts due qualifying MA organizations for MA-affiliated eligible hospitals.

(2) To the extent data are available, qualifying MA organizations must receive hospital incentive payments through their affiliated hospitals under the Medicare FFS EHR hospital incentive program, rather than through the MA EHR hospital incentive program.

(d) *Payment to qualifying MA organizations.* CMS makes payment to qualifying MA organizations for qualifying MA EPs only under the MA EHR incentive program and not under the Medicare FFS EHR incentive program to the extent an EP has earned less than the maximum incentive payment for the same period under the Medicare FFS EHR incentive program.

(e) *Payment review under MA.* To ensure the accuracy of the incentive payments, CMS conducts selected compliance reviews of qualifying MA organizations to ensure that EPs and eligible hospitals for which such qualifying organizations received incentive payments were meaningful EHR users in accordance with § 422.504 of this chapter.

(1) The reviews include validation of the status of the organization as a qualifying MA organization, verification of meaningful use and review of data used to calculate incentive payments.

(2) MA organizations are required to maintain evidence of their qualification to receive incentive payments and the data necessary to accurately calculate incentive payments.

(3) Documents and records must be maintained for 6 years from the date such payments are made with respect to a given payment year.

(4) Payments that result from incorrect or fraudulent attestations, cost data, or any other submission required to establish eligibility or to qualify for such payment, will be recouped by CMS from the MA organization.

§ 495.206 Timeframe for payment to qualifying MA organizations.

(a) CMS makes payment to qualifying MA organizations for qualifying MA EPs under the MA EHR incentive program after computing incentive payments due under the Medicare FFS EHR incentive program according to § 495.102.

(b) Payments to qualifying MA organizations for qualifying MA-affiliated eligible hospitals under common corporate governance are made under the Medicare FFS EHR incentive program, following the timeline in specified in § 495.104 of this part. To the extent sufficient data do not exist to pay qualifying MA-affiliated eligible hospitals under common corporate governance under the Medicare FFS EHR incentive program, payment is made under the MA EHR incentive program, following the same timeline in § 495.104 of this part.

§ 495.208 Avoiding duplicate payment.

(a) Unless a qualifying MA EP is entitled to a maximum payment for a year under the Medicare FFS EHR incentive program, payment for such an individual is only made under the MA EHR incentive program to a qualifying MA organization.

(b) Payment to qualifying MA organizations for a qualifying MA-affiliated eligible hospital under common governance only occurs under

the MA EHR incentive program to the extent that sufficient data does not exist to pay such hospital under the Medicare FFS hospital incentive program under § 495.104 of this part. In no event are EHR incentive payments made for a hospital for a payment year under this section to the extent they have been made for the same hospital for the same payment year under § 495.104 of this part.

(c) Each qualifying MA organization must ensure that all potentially qualifying MA EPs are enumerated through the NPI system and that other identifying information required under § 495.202(b) is provided to CMS.

§ 495.210 Meaningful EHR user attestation.

(a) Qualifying MA organizations are required to attest, in a form and manner specified by CMS, that each qualifying MA EP and qualifying MA-affiliated eligible hospitals is a meaningful EHR user.

(b) Qualifying MA organizations are required to attest within 60 days after the close of a calendar year whether each qualifying MA EP is a meaningful EHR user.

(c) Qualifying MA organizations are required to attest within 60 days after close of the FY whether each qualifying MA-affiliated eligible hospital is a meaningful EHR user.

§ 495.212 Limitation on review.

(a) There is no administrative or judicial review under section 1869 or 1878 of the Act, or otherwise of the methodology and standards for determining payment amounts and payment adjustments under the MA EHR EP incentive program. This includes provisions related to duplication of payment avoidance and rules developed related to the fixed schedule for application of limitation on incentive payments for all qualifying MA EPs related to a specific qualifying MA organization. It also includes the methodology and standards developed for determining qualifying MA EPs and the methodology and standards for determining a meaningful EHR user, including the means of demonstrating meaningful use and the selection of measures.

(b) There is no administrative or judicial review under sections 1869 or 1878 of the Act, or otherwise, of the methodology and standards for determining payment amounts and payment adjustments under the MA EHR hospital incentive program. This includes provisions related to duplication of payment avoidance. It also includes the methodology and standards developed for determining qualifying MA-affiliated eligible hospitals and the methodology and standards for determining a meaningful EHR user, including the means of demonstrating meaningful use and the selection of measures.

Subpart D—Requirements Specific to the Medicaid Program

§ 495.300 Basis and purpose.

This subpart implements section 4201 of the American Reinvestment and Recovery Act of 2009 and sections 1903(a)(3)(F) and 1903(t) of the Act, which authorize States, at their option, to provide for incentive payments to Medicaid providers for adopting, implementing, or upgrading certified EHR technology or for meaningful use of such technology. This subpart also provides enhanced Federal financial participation (FFP) to States to administer these incentive payments.

§ 495.302 Definitions.

As used in this subpart—

Acceptance documents mean written evidence of satisfactory completion of an approved phase of work or contract and acceptance thereof by the State agency.

Acquisition means to acquire health information technology (HIT) equipment or services for the purpose of implementation and administration under this part from commercial sources or from State or local government resources.

Acute care hospital means a health care facility—

(1) Where the average length of patient stay is 25 days or fewer; and

(2) With a CMS certification number (previously known as the Medicare provider number) that has the last four digits in the series 0001–0879 or 1300–1399

Adopt, implement or upgrade means—

(1) Acquire, purchase, or secure access to certified EHR technology;

(2) Install or commence utilization of certified EHR technology capable of meeting meaningful use requirements; or

(3) Expand the available functionality of certified EHR technology capable of meeting meaningful use requirements at the practice site, including staffing, maintenance, and training, or upgrade from existing EHR technology to certified EHR technology per the ONC EHR certification criteria.

Children's hospital means a separately certified children's hospital, either freestanding or hospital-within-hospital that—

(1) Has a CMS certification number, (previously known as the Medicare provider number), that has the last 4 digits in the series 3300–3399; and

(2) Predominantly treats individuals under 21 years of age.

Entities promoting the adoption of certified electronic health record technology means the State-designated entities that are promoting the adoption of certified EHR technology by enabling oversight of the business, operational and legal issues involved in the adoption and implementation of certified EHR technology or by enabling the exchange and use of electronic clinical and administrative data between participating providers, in a secure manner, including maintaining the physical and organizational relationship integral to the adoption of certified EHR technology by eligible providers.

Health information technology planning advance planning document (HIT PAPD) means a plan of action that requests FFP and approval to accomplish the planning necessary for a State agency to determine the need for and plan the acquisition of HIT equipment or services or both and to acquire information necessary to prepare a HIT implementation advanced planning document or request for proposal to implement the State Medicaid HIT plan.

HIT implementation advance planning document (HIT IAPD) means a plan of action that requests FFP and approval to acquire and implement the proposed State Medicaid HIT plan services or equipment or both.

Medicaid information technology architecture (MITA) is both an initiative and a framework. It is a national framework to support improved systems development and health care management for the Medicaid enterprise. It is an initiative to establish national guidelines for technologies and processes that enable improved program administration for the Medicaid enterprise. The MITA initiative includes an architecture framework, models, processes, and planning guidelines for enabling State Medicaid enterprises to meet common objectives with the framework while supporting unique local needs.

Medicaid management information system (MMIS) means a mechanized claims processing and information retrieval system—referred to as Medicaid Management Information Systems (MMIS)—that meets specified requirements and that the Department has found (among other things) is compatible with the claims processing and information retrieval systems used in the administration of the Medicare program. The objectives of the MMIS are

to include claims processing and retrieval of utilization and management information necessary for program administration and audit and must coordinate with other mechanized systems and subsystems that perform other functions, such as eligibility determination.

Needy individuals mean individuals that meet one of following:

(1) Received medical assistance from Medicaid or the Children's Health Insurance Program. (or a Medicaid or CHIP demonstration project approved under section 1115 of the Act).

(2) Were furnished uncompensated care by the provider.

(3) Were furnished services at either no cost or reduced cost based on a sliding scale determined by the individuals' ability to pay.

Patient volume means the minimum participation threshold (as described at § 495.304(c) through (e)) that is estimated through a numerator and denominator, consistent with the SMHP, and that meets the requirements of § 495.306.

Practices predominantly means an EP for whom the clinical location for over 50 percent of his or her total patient encounters over a period of 6 months in the most recent calendar year occurs at a federally qualified health center or rural health clinic.

Service oriented architecture or service component based architecture means organizing and developing information technology capabilities as collaborating services that interact with each other based on open standards.

State Medicaid health information technology plan (SMHP) means a document that describes the State's current and future HIT activities.

State self-assessment means a process that a State uses to review its strategic goals and objectives, measure its current business processes and capabilities against the (MITA) business capabilities and ultimately develops target capabilities to transform its Medicaid enterprise to be consistent with the MITA principles.

§ 495.304 Medicaid provider scope and eligibility.

(a) *General rule.* The following Medicaid providers are eligible to participate in the HIT incentives program:

(1) Medicaid EPs.

(2) Acute care hospitals.

(3) Children's hospitals.

(b) *Medicaid EP.* The Medicaid professional eligible for an EHR incentive payment is limited to the following when consistent with the scope of practice regulations, as applicable for each professional (§ 440.50, § 440.60, § 440.100; § 440.165, and § 440.166):

(1) A physician.

(2) A dentist.

(3) A certified nurse-midwife.

(4) A nurse practitioner.

(5) A physician assistant practicing in a Federally qualified health center (FQHC) led by a physician assistant or a rural health clinic (RHC), that is so led by a physician assistant.

(c) *Additional requirements for the Medicaid EP.* To qualify for an EHR incentive payment, a Medicaid EP must, for each year for which the EP seeks an EHR incentive payment, not be hospital-based as defined at § 495.4 of this subpart, and meet one of the following criteria:

(1) Have a minimum 30 percent patient volume attributable to individuals receiving Medicaid.

(2) Have a minimum 20 percent patient volume attributable to individuals receiving Medicaid, and be a pediatrician.

(3) Practice predominantly in a FQHC or RHC and have a minimum 30 percent patient volume attributable to needy individuals, as defined at § 495.302.

(d) *Exception.* The hospital-based exclusion in paragraph (c) of this section does not apply to the Medicaid-EP qualifying based on practicing predominantly at a FQHC or RHC.

(e) *Additional requirement for the eligible hospital.* To be eligible for an EHR incentive payment for each year for which the eligible hospital seeks an EHR incentive payment, the eligible hospital must meet the following criteria:

(1) An acute care hospital must have at least a 10 percent Medicaid patient volume for each year for which the hospital seeks an EHR incentive payment.

(2) A children's hospital is exempt from meeting a patient volume threshold.

§ 495.306 Establishing patient volume.

(a) *General rule.* A Medicaid provider must annually meet patient volume requirements of § 495.304, as these requirements are established through the State's SMHP in accordance with the remainder of this section.

(b) *State option(s) through SMHP.* A State must submit through the SMHP the option or options it has selected for measuring patient volume. A State must select the methodology described in either paragraph (c) or paragraph (d) of section (or both methodologies). In addition, or as an alternative, a State may select the methodology described in paragraph (g) of this section.

(c) *Methodology, patient encounter.*

(1) *EPs.* To calculate Medicaid patient volume, an EP must divide:

(*i*) The total Medicaid patient encounters in any representative, continuous 90-day period in the preceding calendar year; by

(*ii*) The total patient encounters in the same 90-day period.

(2) *Eligible hospitals.* To calculate Medicaid patient volume, an eligible hospital must divide—

(i) The total Medicaid encounters in any representative, continuous 90-day period in the preceding fiscal year; by

(ii) The total encounters in the same 90-day period.

(3) *Needy individual patient volume.* To calculate needy individual patient volume, an EP must divide—

(*i*) The total needy individual patient encounters in any representative, continuous 90-day period in the preceding calendar year; by

(ii) The total patient encounters in the same 90-day period.

(d) *Methodology, patient panel.*

(1) *EPs.* To calculate Medicaid patient volume, an EP must divide:

(i) (A) The total Medicaid patients assigned to the EP's panel in any representative, continuous 90-day period in the preceding calendar year when at least one Medicaid encounter took place with the Medicaid patient in the year prior to the 90-day period; plus

(B) Unduplicated Medicaid encounters in the same 90-day period; by

(ii)(A) The total patients assigned to the provider in that same 90-day period with at least one encounter taking place with the patient during the year prior to the 90-day period; plus

(B) All unduplicated patient encounters in the same 90-day period.

(2) *Needy individual patient volume.* To calculate needy individual patient volume an EP must divide—

(i)(A) The total Needy Individual patients assigned to the EP's panel in any representative, continuous 90-day period in the preceding calendar year when at least one Needy Individual encounter took place with the Medicaid patient in the year prior to the 90-day period; plus

(B) Unduplicated Needy Individual encounters in the same 90-day period, by

(ii)(A) The total patients assigned to the provider in that same 90-day period with at least one encounter taking place with the patient during the year prior to the 90-day period, plus

(B) All unduplicated patient encounters in the same 90-day period.

(e) For purposes of this section, the following rules apply:

(1) For purposes of calculating EP patient volume, a Medicaid encounter means services rendered to an individual on any one day where—

(i) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for part or all of the service; or

(ii) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid all or part of the individual's premiums, co-payments, and cost-sharing.

(2) For purposes of calculating hospital patient volume, both of the following definitions in paragraphs (e)(2)(i) and (e)(2)(ii) of this section may apply:

(i) A Medicaid encounter means services rendered to an individual per inpatient discharge where—

(A) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for part or all of the service; or

(B) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid all or part of the individual's premiums, co-payments, and/or cost-sharing.

(ii) A Medicaid encounter means services rendered in an emergency department on any one day where—

(A) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for part or all of the service; or

(B) Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid all or part of the individual's premiums, co-payments, and cost-sharing.

(3) For purposes of calculating needy individual patient volume, a needy patient encounter means services rendered to an individual on any one day where—

(i) Medicaid or CHIP (or a Medicaid or CHIP demonstration project approved under section 1115 of the Act) paid for part or all of the service;

(ii) Medicaid or CHIP (or a Medicaid or CHIP demonstration project approved under section 1115 of the Act) paid all or part of the individual's premiums, co-payments, or cost-sharing;

(iii) The services were furnished at no cost; and calculated consistent with § 495.310(h); or

(iv) The services were paid for at a reduced cost based on a sliding scale determined by the individual's ability to pay.

(f) *Exception.* A children's hospital is not required to meet Medicaid patient volume requirements.

(g) *Establishing an alternative methodology.* A State may submit to CMS for review and approval through the SMHP an alternative from the options included in paragraphs (c) and (d) of this section, so long as it meets the following requirements:

(1) It is submitted consistent with all rules governing the SMHP at § 495.332.

(2) Has an auditable data source.

(3) Has received input from the relevant stakeholder group.

(4) It does not result, in the aggregate, in fewer providers becoming eligible than the methodologies in either paragraphs (c) and (d) of this section.

(h) *Group practices.* Clinics or group practices will be permitted to calculate patient volume at the group practice/clinic level, but only in accordance with all of the following limitations:

(1) The clinic or group practice's patient volume is appropriate as a patient volume methodology calculation for the EP.

(2) There is an auditable data source to support the clinic's or group practice's patient volume determination.

(3) All EPs in the group practice or clinic must use the same methodology for the payment year.

(4) The clinic or group practice uses the entire practice or clinic's patient volume and does not limit patient volume in any way.

(5) If an EP works inside and outside of the clinic or practice, then the patient volume calculation includes only those encounters associated with the clinic or group practice, and not the EP's outside encounters.

§ 495.308 Net average allowable costs as the basis for determining the incentive payment.

(a) *The first year of payment.* (1) The incentive is intended to offset the costs associated with the initial adoption, implementation or upgrade of certified electronic health records technology.

(2) The maximum net average allowable costs for the first year are $25,000.

(b) *Subsequent payment years.* (1) The incentive is intended to offset maintenance and operation of certified EHR technology.

(2) The maximum net average allowable costs for each subsequent year are $10,000.

§ 495.310 Medicaid provider incentive payments.

(a) *Rules for Medicaid EPs.* The Medicaid EP's incentive payments are subject to all of the following limitations:

(1) *First payment year.* (i) For the first payment year, payment under this subpart may not exceed 85 percent of the maximum threshold of $25,000, which equals $21,250.

(ii) Medicaid EPs are responsible for payment for the remaining 15 percent of the net average allowable cost of certified EHR technology, or $3,750 for the first payment year.

(iii) An EP may not begin receiving payments any later than CY 2016.

(2) *Subsequent annual payment years.*

(i) For subsequent payment years, payment may not exceed 85 percent of the maximum threshold of $10,000, which equals $8,500.

(ii) Medicaid EPs are responsible for payment for the remaining 15 percent of the net average allowable cost of certified EHR technology, or $1,500 per payment year.

(iii) Payments after the first payment year may continue for a maximum of 5 years.

(iv) Medicaid EPs may receive payments on a non-consecutive, annual basis.

(v) No payments may be made after CY 2021.

(3) *Maximum incentives.* In no case may a Medicaid EP participate for more than a total of 6 years, and in no case will the maximum incentive over a 6-year period exceed $63,750.

(4) *Limitation.* For a Medicaid EP who is a pediatrician described in paragraph (b) of this section payment is limited as follows:

(i) The maximum payment in the first payment year is further reduced by two-thirds, which equals $14,167.

(ii) The maximum payment in subsequent payment years is further reduced by two-thirds, which equals $5,667.

(iii) In no case will the maximum incentive payment to a pediatrician under this limitation exceed $42,500 over a 6-year period.

(b) *Optional exception for pediatricians.* A pediatrician described in this paragraph is a Medicaid EP who does not meet the 30 percent patient volume requirements described in § 495.304 and § 495.306, but who meets the 20 percent patient volume requirements described in such sections.

(c) *Limitation to only one EHR incentive program.* An EP may only receive an incentive payment from either Medicare or Medicaid in a payment year, but not both.

(d) *Exception for EPs to switch programs.* An EP may change his or her EHR incentive payment program election once, consistent with § 495.10 of this part.

(e) *Limitation to one State only.* A Medicaid EP or eligible hospital may receive an incentive payment from only one State in a payment year.

(f) *Incentive payments to hospitals.* Incentive payments to an eligible

hospital under this subpart are subject to all of the following conditions:

(1) The payment is provided over a minimum of a 3-year period and maximum of a 6-year period.

(2) The total incentive payment received over all payment years of the program is not greater than the aggregate EHR incentive amount, as calculated under paragraph (g) of this section.

(3) No single incentive payment for a payment year may exceed 50 percent of the aggregate EHR hospital incentive amount calculated under paragraph (g) of this section for an individual hospital.

(4) No incentive payments over a 2-year period may exceed 90 percent of the aggregate EHR hospital incentive amount calculated under paragraph (g) of this section for an individual hospital.

(5) No hospital may begin receiving incentive payments for any year after FY 2016, and after FY 2016, a hospital may not receive an incentive payment unless it received an incentive payment in the prior fiscal year.

(6) Prior to FY 2016, payments can be made to an eligible hospital on a non-consecutive, annual basis for the fiscal year.

(7) A multi-site hospital with one CMS Certification Number is considered one hospital for purposes of calculating payment.

(g) *Calculation of the aggregate EHR hospital incentive amount.* The aggregate EHR hospital incentive amount is calculated as the product of the (overall EHR amount) times (the Medicaid Share).

(1) *Overall EHR amount.* The overall EHR amount for an eligible hospital is based upon a theoretical 4 years of payment the hospital would receive based, for each of such 4 years, upon the product of the following:

(i) *Initial amount.* The initial amount is equal to the sum of—

(A) The base amount which is set at $2,000,000 for each of the theoretical 4 years; plus

(B) The discharge-related amount for a 12-month period selected by the State, but ending in the Federal fiscal year before the hospital's fiscal year that serves as the first payment year. The discharge-related amount is the sum of the following, with discharges over the 12-month period and based upon the total discharges for the eligible hospital (regardless of any source of payment):

(*1*) For the first through 1,149th discharge, $0.

(*2*) For the 1,150th through the 23,000th discharge, $200.

(*3*) For any discharge greater than the 23,000th, $0.

(C) For purposes of calculating the discharge-related amount under paragraph (g)(1)(i)(B) of this section, for the last 3 of the theoretical 4 years of payment, discharges are assumed to increase by the provider's average annual rate of growth for the most recent 3 years for which data are available per year. Negative rates of growth must be applied as such.

(ii) *Medicare share.* The Medicare share, which equals 1.

(iii) *Transition factor.* The transition factor which equals as follows:

(A) For the first of the theoretical 4 years, 1.

(B) For the second of the theoretical 4 years, ¾.

(C) For the third of the theoretical 4 years, ½.

(D) For the fourth of the theoretical 4 years, ¼.

(2) *Medicaid share.* The Medicaid share specified under this paragraph for an eligible hospital is equal to a fraction—

(i) The numerator of which is the sum (for the 12-month period selected by the State and with respect to the eligible hospital) of—

(A) The estimated number of inpatient-bed-days which are attributable to Medicaid individuals; and

(B) The estimated number of inpatient-bed-days which are attributable to individuals who are enrolled in a managed care organization, a pre-paid inpatient health plan, or a pre-paid ambulatory health plan under part 438 of this chapter; and

(ii) The denominator of which is the product of—

(A) The estimated total number of inpatient-bed-days with respect to the eligible hospital during such period; and

(B) The estimated total amount of the eligible hospital's charges during such period, not including any charges that are attributable to charity care, divided by the estimated total amount of the hospital's charges during such period.

(iii) In computing inpatient-bed-days under paragraph (g)(2)(i) of this section, a State may not include estimated inpatient-bed-days attributable to individuals with respect to whom payment may be made under Medicare Part A, or inpatient-bed-days attributable to individuals who are enrolled with a Medicare Advantage organization under Medicare Part C.

(h) *Approximate proxy for charity care.* If the State determines that an eligible provider's data are not available on charity care necessary to calculate the portion of the formula specified in paragraph (g)(2)(ii)(B) of this section, the State may use that provider's data on uncompensated care to determine an appropriate proxy for charity care, but must include a downward adjustment to eliminate bad debt from uncompensated care data. The State must use auditable data sources.

(i) *Deeming.* In the absence of the data necessary, with respect to an eligible hospital the amount described in paragraph (g)(2)(ii)(B) of this section must be deemed to be 1. In the absence of data, with respect to an eligible hospital, necessary to compute the amount described in paragraph (g)(2)(i)(B) of this section, the amount under such clause must be deemed to be 0.

(j) *Dual eligibility for incentives payments.* A hospital may receive incentive payments from both Medicare and Medicaid if it meets all eligibility criteria in the payment year.

(k) *Payments to State-designated entities.* Payments to entities promoting the adoption of certified EHR technology as designated by the State must meet the following requirements:

(1) A Medicaid EP may reassign his or her incentive payment to an entity promoting the adoption of certified EHR technology, as defined in § 495.302, and as designated by the State, only under the following conditions:

(i) The State has established a method to designate entities promoting the adoption of EHR technology that comports with the Federal definition in § 495.302.

(ii) The State publishes and makes available to all EPs a voluntary mechanism for reassigning annual payments and includes information about the verification mechanism the State will use to ensure that the reassignment is voluntary and that no more than 5 percent of the annual payment is retained by the entity for costs not related to certified EHR technology.

(2) [Reserved].

§ 495.312 Process for payments.

(a) *General rule.* States must have a process for making payments consistent with the requirements in subparts A and D of this part.

(b) *Reporting data consistent with this subpart.* In order to receive a payment under this part, a provider must report the required data under subpart A and this subpart within the EHR reporting period described in § 495.4.

(c) *State role.* The State determines the provider's eligibility for the EHR incentive payment under subpart A and this subpart and approves, processes, and makes timely payments using a process approved by CMS.

(d) *State disbursement.* The State disburses an incentive payment to the provider based on the criteria described in subpart A and this subpart.

(e) *Timeframes.* Payments are disbursed consistent with the following timeframes for each type of Medicaid eligible provider:

(1) *Medicaid EPs.* States disburse payments consistent with the calendar year on a rolling basis following verification of eligibility for the payment year.

(2) *Medicaid eligible hospitals.* States disburse payments consistent with the Federal fiscal year on a rolling basis following verification of eligibility for the payment year.

§ 495.314 Activities required to receive an incentive payment.

(a) *First payment year.* (1) In the first payment year, to receive an incentive payment, the Medicaid EP or eligible hospital must meet one of the following:

(i) Demonstrate that during the payment year, it has adopted, implemented, or upgraded certified EHR technology, as defined in § 495.302.

(ii) Demonstrate that during the EHR reporting period for a payment year, it is a meaningful EHR user as defined in § 495.4.

(2) A provider may notify the State of its non-binding intention to participate in the incentives program prior to having fulfilled all of the eligibility criteria.

(b) *Subsequent payment years.* (1) In the second, third, fourth, fifth, and sixth payment years, to receive an incentive payment, the Medicaid EP or eligible hospital must demonstrate that during the EHR reporting period for the applicable payment year, it is a meaningful EHR user, as defined in § 495.4.

(2) The automated reporting of the clinical quality measures will be accomplished using certified EHR technology interoperable with the system designated by the State to receive the data.

§ 495.316 State monitoring and reporting regarding activities required to receive an incentive payment.

(a) Subject to § 495.332 the State is responsible for tracking and verifying the activities necessary for a Medicaid EP or eligible hospital to receive an incentive payment for each payment year, as described in § 495.314.

(b) Subject to § 495.332, the State must submit a State Medicaid HIT Plan to CMS that includes—

(1) A detailed plan for monitoring, verifying and periodic auditing of the requirements for receiving incentive payments, as described in § 495.314; and

(2) A description of the how the State will collect and report on provider meaningful use of certified EHR technology.

(c) Subject to § 495.332 and § 495.352 the State is required to submit to CMS annual reports on the following:

(1) Provider adoption, implementation, or upgrade of certified EHR technology activities and payments; and

(2) Aggregated, de-identified meaningful use data.

(d)(1) The annual report described in paragraph (c) of this section must include, but is not limited to the following:

(i) The number, type, and practice location(s) of providers who qualified for an incentive payment on the basis of having adopted, implemented, or upgraded certified EHR technology.

(ii) Aggregated data tables representing the provider adoption, implementation, or upgrade of certified EHR technology.

(iii) The number, type, and practice location(s) of providers who qualified for an incentive payment on the basis of demonstrating that they are meaningful users of certified EHR technology;

(iv) Aggregated data tables representing the provider's clinical quality measures data; and

(v) A description and quantitative data on how its incentive payment program addressed individuals with unique needs such as children.

(2) Subject to § 495.332, the State may propose a revised definition of meaningful use of certified EHR technology, subject to CMS prior approval, but only with respect to the following objectives:

(i) Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach.

(ii) Capability to submit electronic data to immunization registries or immunization information systems and actual submission in accordance with applicable law and practice.

(iii) Capability to provide electronic submission of reportable (as required by State or local law) lab results to public health agencies and actual submission in accordance with applicable law and practice; and

(iv) Capability to provide electronic syndromic surveillance data to public health agencies and actual transmission in accordance with applicable law and practice.

(e) State failure to submit the required reports to CMS may result in discontinued or disallowed funding.

§ 495.318 State responsibilities for receiving FFP.

In order to be provided FFP under section 1903(a)(3)(F) of the Act, a State must demonstrate to the satisfaction of HHS, that the State is—

(a) Using the funds provided for the purposes of administering incentive payments to providers under this program, including tracking of meaningful use by Medicaid providers of EHR technology;

(b) Conducting adequate oversight of the program, including routine tracking of meaningful use attestations and reporting mechanisms; and

(c) Is pursuing initiatives to encourage the adoption of certified EHR technology to promote health care quality and the exchange of health care information, subject to applicable laws and regulations governing such exchange.

§ 495.320 FFP for payments to Medicaid providers.

Subject to the requirements outlined in this subpart, FFP is available at 100 percent of State expenditures for payments to Medicaid eligible providers to encourage the adoption and meaningful use of certified EHR technology.

§ 495.322 FFP for reasonable administrative expenses.

Subject to prior approval conditions at § 495.324 of this subpart, FFP is available at 90 percent in State expenditures for administrative activities in support of implementing incentive payments to Medicaid eligible providers.

§ 495.324 Prior approval conditions.

(a) A State must obtain prior written approval as specified in paragraph (b) of this section, when the State plans to initiate planning and implementation activities in support of Medicaid provider incentive payments encouraging the adoption and meaningful use of certified EHR technology with proposed Federal financial participation.

(b) To receive 90 percent match, each State must receive prior approval for all of the following:

(1) The HIT advance planning document and the implementation advance planning document.

(2) A request for proposal and any contract that a State may utilize to complete activities under this subpart, unless specifically exempted by the Department of Health and Human Services, prior to release of the request for proposal or prior to execution of a contract.

(3) For contract amendments, unless specifically exempted by HHS, before execution of the contract amendment, involving contract cost increases exceeding $100,000 or contract time extensions of more than 60 days.

(4) The State Medicaid HIT plan.

(c) Failure to submit any of the information specified in paragraph (b) of this section to the satisfaction of HHS may result in disapproval or suspension of project funding.

(d) A State must obtain prior written approval from HHS of its justification for a sole source acquisition, when it plans to acquire non-competitively from a nongovernmental source HIT equipment or services, with proposed FFP under this subpart if the total State and Federal acquisition cost is more than $100,000.

§ 495.326 Disallowance of FFP.

If the HHS finds that any acquisition approved or modified under the provisions of this subpart fails to comply with the criteria, requirements, and other undertakings described in the approved HIT planning advance planning document and HIT implementation advance planning document to the detriment of the proper and efficient operation of the Medicaid program, payment of FFP may be disallowed. In the case of a suspension of approval of a HIT planning advance planning document and HIT implementation advance planning document, suspension would occur in the same manner as 45 CFR 205.37(c) and 307.40(a).

§ 495.328 Request for reconsideration of adverse determination.

If CMS disapproves a State request for any elements of a State's advance planning document or State Medicaid HIT Plan under this subpart, or determines that requirements are met for approval on a date later than the date requested, the decision notice includes the following:

(a) The finding of fact upon which the determination was made.

(b) The procedures for appeal of the determination in the form of a request for reconsideration.

§ 495.330 Termination of FFP for failure to provide access to information.

(a) HHS terminates FFP at any time if the Medicaid agency fails to provide State and Federal representatives with full access to records relating to HIT planning and implementation efforts, and the systems used to interoperate with electronic HIT, including on-site inspection.

(b) The Department may request such access at any time to determine whether the conditions in this subpart are being met.

§ 495.332 State Medicaid health information technology (HIT) plan requirements.

Each State Medicaid HIT plan must include all of the following elements:

(a) *State systems.* For State systems, interoperability, and the current and future visions:

(1) A baseline assessment of the current HIT landscape environment in the State including the inventory of existing HIT in the State. The assessment must include a comprehensive—

(i) Description of the HIT "as-is" landscape;

(ii) Description of the HIT "to-be" landscape; and

(iii) HIT roadmap and strategic plan for the next 5 years.

(2) A description of how the State Medicaid HIT plan will be planned, designed, developed and implemented, including how it will be implemented in accordance with the Medicaid Information Technology Architecture (MITA) principles as described in the Medicaid Information Technology Framework 2.0. The MITA initiative—

(i) Establishes national guidelines for technologies and processes that enable improved program administration for the Medicaid enterprise;

(ii) Includes business, information and technology architectures that provide an overall framework for interoperability, as well as processes and planning guidelines for enabling State Medicaid enterprises to meet common objectives within the framework while supporting unique local needs; and

(iii) Is important to the design and development of State EHR incentive payment systems.

(3) A description of how intrastate systems, including the Medicaid Management Information System (MMIS) and other automated mechanized claims processing and information retrieval systems—

(i) Have been considered in developing a HIT solution; and

(ii) A plan that incorporates the design, development, and implementation phases for interoperability of such State systems with a description of how any planned systems enhancements support overall State and Medicaid goals.

(4) A description of data-sharing components of HIT solutions.

(5) A description of how each State will promote secure data exchange, where permissible under the Health Insurance Portability and Accountability Act (HIPAA) and other requirements included in ARRA.

(6) A description of how each State will promote the use of data and technical standards to enhance data consistency and data sharing through common data-access mechanisms.

(7) A description of how each State will support integration of clinical and administrative data.

(8) A description of the process in place for ensuring improvements in health outcomes, clinical quality, or efficiency resulting from the adoption of certified EHR technology by recipients of Medicaid incentive payments and a methodology for verifying such information.

(9) A description of the process in place for ensuring that any certified EHR technology used as the basis for a payment incentive to Medicaid providers is compatible with State or Federal administrative management systems, including the MMIS or other automated claims processing system or information retrieval system and a methodology for verifying such information.

(10) A description of how each State will adopt national data standards for health and data exchange and open standards for technical solutions as they become available.

(11) A description of how the State intends to address the needs of underserved and vulnerable populations such as children, individuals with chronic conditions, Title IV–E foster care children, individuals in long-term care settings and the aged, blind, and disabled. This description must address the following:

(i) Person centered goals and objectives and shared decision-making;

(ii) Coordination of care across multiple service providers, funding sources, settings, and patient conditions—

(iii) Universal design to ensure access by people with disabilities and older Americans; and

(iv) Institutional discharge planning and diversion activities that are tied to community based service availability.

(b) *Eligibility.* For eligibility, a description of the process in place for all of the following:

(1) For ensuring that each EP and eligible hospital meets all provider enrollment eligibility criteria upon enrollment and re-enrollment to the Medicaid EHR payment incentive program.

(2) For ensuring patient volume consistent with the criteria in § 495.304 and § 495.306 for each EP who practices predominantly in a FQHC or RHC and for each Medicaid EP who is a

physician, pediatrician, nurse practitioner, certified nurse midwife or dentist and a methodology in place used to verify such information.

(3) For ensuring that the EP or eligible hospital is a provider who meets patient volume consistent with the criteria in § 495.304 and § 495.306 and a methodology in place used to verify such information.

(4) For ensuring that each Medicaid EP is not hospital-based and a methodology in place used to verify such information.

(5) To ensure that a hospital eligible for incentive payments has demonstrated an average length of stay of 25 days or less and a methodology for verifying such information.

(c) *Monitoring and validation.* For monitoring and validation of information, States must include the following:

(1) A description of the process in place for ensuring that, because of CMS' and the States' oversight responsibilities, all provider information for attestations including meaningful use, efforts to adopt, implement, or upgrade and any information added to the CMS Single Provider Repository including all information related to patient volume, NPI, Tax identification number (TIN), are all true and accurate and that any concealment or falsification of a material fact related to the attestation may result in prosecution under Federal and State laws and a methodology in place used to verify such information.

(2) A description of the process in place for ensuring that the EP or eligible hospital is eligible to receive an incentive payment consistent with the criteria outlined in § 495.314 and a methodology in place used to verify such information.

(3) A description of the process in place for capturing attestations from each EP or eligible hospital that they have meaningfully used certified EHR technology during the EHR reporting period, and that they have adopted, implemented, or upgraded certified EHR technology and a description of the methodology in place used to verify such information.

(4) A description of the process in place for capturing clinical quality data from each EP or eligible hospital and a description of the methodology in place used to verify such information.

(5) A description of the process in place for monitoring the compliance of providers coming onto the program with different requirements depending upon their participation year and a methodology for verifying such information.

(6) A list of the specific actions planned to implement the EHR incentive program, including a description and organizational charts for workgroups within State government including external partners.

(7) A description of the process in place to ensure that no amounts higher than 100 percent of FFP will be claimed by the State for reimbursement of expenditures for State payments to Medicaid eligible providers for the certified EHR technology incentive payment program and a methodology for verifying such information.

(8) A description of the process in place to ensure that no amounts higher than 90 percent of FFP will be claimed by the State for administrative expenses in administering the certified EHR technology incentive payment program and a methodology for verifying such information.

(9) A description of the process and methodology for ensuring and verifying the following:

(i) Amounts received under section 1903(a)(3)(F) of the Act with respect to payments to a Medicaid EP or eligible hospital are paid directly to such provider (or to an employer or facility to which such provider has assigned payments) without any deduction or rebate.

(ii) All incentive payment reassignments to an entity promoting the adoption of certified EHR technology, as designated by the State, are voluntary for the Medicaid EP involved.

(iii) Entities promoting the adoption of certified EHR technology do not retain more than 5 percent of such payments for costs not related to certified EHR technology (and support services including maintenance and training) that is for, or is necessary for the operation of, such technology.

(10) A description of the process in place for ensuring that each Medicaid EP or eligible hospital that collects an EHR payment incentive has collected a payment incentive from only one State even if the provider is licensed to practice in multiple States and a methodology for verifying such information.

(11)(i) A description of the process in place for ensuring that each EP or eligible hospital that wishes to participate in the EHR incentive payment program will receive a NPI; and

(ii) A description of how the NPI will be used to coordinate with the CMS so that the EP will choose only one program from which to receive the incentive payment and the hospital payments are tracked accordingly.

(12) A description of the process in place for ensuring that each EP or eligible hospital who wishes to participate in the EHR incentive payment program will provide a TIN to the State for purposes of the incentive payment.

(d) *Payments.* For payments, States must provide descriptions of the following processes that are in place:

(1) The process in place for ensuring that there is no duplication of Medicare and Medicaid incentive payments to EPs and a methodology for verifying such information.

(2) The process in place to ensure that any existing fiscal relationships with providers to disburse the incentive payments through Medicaid managed care plans does not result in payments that exceed 105 percent of the capitation rate, in order to comply with the Medicaid managed care incentive payment rules at § 438.6(v)(5)(iii) of this chapter and a methodology for verifying such information.

(3) The process in place to ensure that only appropriate funding sources are used to make Medicaid EHR incentive payments and the methodology for verifying such information.

(4) The process in place and the methodology for verifying that information is available in order to ensure that Medicaid EHR incentive payments are made for no more than a total of 6 years; that no EP or eligible hospital begins receiving payments after 2016; that incentive payments cease after 2021; and that an eligible hospital does not receive incentive payments after FY 2016 unless the hospital received an incentive payment in the prior fiscal year.

(5) The process in place to ensure that Medicaid EHR incentive payments are not paid at amounts higher than 85 percent of the net average allowable cost of certified EHR technology and the yearly maximum allowable payment thresholds and a methodology for verifying such information.

(6) The process in place to ensure that all hospital calculations and hospital payment incentives are made consistent with the requirements of this part and a methodology for verifying such information.

(7) The process in place to provide for the timely and accurate payment of incentive payments to EPs and eligible hospitals, including the timeframe specified by the State to meet the timely payment requirement.

(8) The process in place and a methodology for verifying such information to provide that any monies that have been paid inappropriately as an improper payment or otherwise not

in compliance with this subpart will be recouped and FFP will be repaid.

(9) The process in place and the methodology for verifying that EPs meet their responsibility for 15 percent of the net average allowable cost for certified EHR technology.

(e) *For combating fraud and abuse and for provider appeals.* (1) A description of the process in place for a provider to appeal consistent with the criteria described in § 495.370 and a methodology for verifying the following related to the EHR incentives payment program:

(i) Incentive payments.

(ii) Provider eligibility determinations.

(iii) Demonstration of efforts to adopt, implement or upgrade and meaningful use eligibility for incentive payments under this part.

(2) A description of the process in place, and a methodology for verifying such information, to address Federal laws and regulations designed to prevent fraud, waste, and abuse, including, but not limited to applicable provisions of Federal criminal law, the False Claims Act (32 U.S.C. 3729 *et seq.*), and the anti-kickback statute (section 1128B(b) of the Act).

(f) *Optional—proposed alternatives.* A State may choose to propose any of the following, but they must be included as an element in the State Medicaid HIT Plan for review and approval:

(1) An alternative methodology for measuring patient volume, consistent with § 495.306(g).

(2)(i) A revised definition of meaningful use of certified EHR technology consistent with § 495.4 and § 495.316(d)(2) of this part.

(ii) Any revised definition of meaningful use may not require additional functionality beyond that of certified EHR technology and conform with CMS guidance on Stage 1. See also § 495.316(d)(2).

§ 495.334 [Reserved]

§ 495.336 Health information technology planning advance planning document requirements (HIT PAPD).

Each State's HIT PAPD must contain the following:

(a) A statement of need and objective which clearly state the purpose and objectives of the project to be accomplished and the necessity for the project.

(b) A project management plan which addresses the following:

(1) The planning project organization.

(2) Planning activities and deliverables.

(3) State and contractor resource needs.

(4) Planning project procurement activities and schedule.

(c) A specific budget for the planning of the project.

(d) An estimated total project cost and a prospective State and Federal cost distribution, including planning and implementation.

(e) A commitment to submit a HIT implementation advance planning document.

(f) A commitment to conduct and complete activities which will result in the production of the State Medicaid HIT plan that includes conduct of the following activities:

(1) A statewide HIT environmental baseline self-assessment.

(2) An assessment of desired HIT future environment.

(3) Development of benchmarks and transition strategies to move from the current environment to the desired future environment.

(g) A commitment to submit the plan to CMS for approval.

§ 495.338 Health information technology implementation advance planning document requirements (HIT IAPD).

Each State's HIT IAPD must contain the following:

(a) The results of the activities conducted as a result of the HIT planning advance planning document, including the approved state Medicaid HIT plan.

(b) A statement of needs and objectives.

(c) A statement of alternative considerations.

(d) A personnel resource statement indicating availability of qualified and adequate staff, including a project director to accomplish the project objectives.

(e) A detailed description of the nature and scope of the activities to be undertaken and the methods to be used to accomplish the project.

(f) The proposed activity schedule for the project.

(g) A proposed budget including a consideration of all HIT implementation advance planning document activity costs, including but not limited to the following:

(1) The cost to implement and administer incentive payments.

(2) Procurement or acquisition.

(3) State personnel.

(4) Contractor services.

(5) Hardware, software, and licensing.

(6) Equipment and supplies.

(7) Training and outreach.

(8) Travel.

(9) Administrative operations.

(10) Miscellaneous expenses for the project.

(h) An estimate of prospective cost distribution to the various State and Federal funding sources and the proposed procedures for distributing costs including:

(1) Planned annual payment amounts;

(2) Total of planned payment amounts; and

(3) Calendar year of each planned annual payment amount.

(4) A statement setting forth the security and interface requirements to be employed for all State HIT systems, and related systems, and the system failure and disaster recovery procedures available.

§ 495.340 As-needed HIT PAPD update and as-needed HIT IAPD update requirements.

Each State must submit a HIT PAPD update or a HIT IAPD no later than 60 days after the occurrence of project changes including but not limited to any of the following:

(a) A projected cost increase of $100,000 or more.

(b) A schedule extension of more than 60 days for major milestones.

(c) A significant change in planning approach or implementation approach, or scope of activities beyond that approved in the HIT planning advance planning document or the HIT implementation advance planning document.

(d) A change in implementation concept or a change to the scope of the project.

(e) A change to the approved cost allocation methodology.

§ 495.342 Annual HIT IAPD requirements.

Each State's annual HIT IAPD is due 60 days from the HIT IAPD approved anniversary date and must contain the following:

(a) A reference to the approved HIT PAPD/IAPD and all approved changes.

(b) A project activity status which reports the status of the past year's major project tasks and milestones, addressing the degree of completion and tasks/milestones remaining to be completed and discusses past and anticipated problems or delays in meeting target dates in the approved HIT technology PAPD/IAPD and approved changes to it.

(c) A report of all project deliverables completed in the past year and degree of completion for unfinished products.

(d) A project activity schedule for the remainder of the project.

(e) A project expenditure status which consists of a detailed accounting of all expenditures for project development over the past year and an explanation of the differences between projected expenses in the approved HIT PAPD/

IAPD and actual expenditures for the past year.

(f) A report of any approved or anticipated changes to the allocation basis in the advance planning document's approved cost methodology.

§ 495.344 Approval of the State Medicaid HIT plan, the HIT PAPD and update, the HIT IAPD and update, and the annual HIT IAPD.

HHS will not approve the State Medicaid HIT plan, HIT PAPD and update, HIT–IAPD and update, or annual IAPD if any of these documents do not include all of the information required under this subpart.

§ 495.346 Access to systems and records.

The State agency must allow HHS access to all records and systems operated by the State in support of this program, including cost records associated with approved administrative funding and incentive payments to Medicaid providers. State records related to contractors employed for the purpose of assisting with implementation or oversight activities or providing assistance, at such intervals as are deemed necessary by the Department to determine whether the conditions for approval are being met and to determine the efficiency, economy, and effectiveness of the program.

§ 495.348 Procurement standards.

(a) *General rule.* Procurements of HIT equipment and services are subject to the following procurement standards in paragraphs (b) through (f) of this section regardless of any conditions for prior approval. These standards—

(1) Include a requirement for maximum practical open and free competition regardless of whether the procurement is formally advertised or negotiated.

(2) Are established to ensure that such materials and services are obtained in a cost effective manner and in compliance with the provisions of applicable Federal statutes and executive orders.

(3) Apply when the cost of the procurement is treated as a direct cost of an award.

(b) *Grantee responsibilities.* The standards contained in this section do not relieve the Grantee of the contractual responsibilities arising under its contract(s).

(1) The grantee is the responsible authority, without recourse to the Departmental awarding agency, regarding the settlement and satisfaction of all contractual and administrative issues arising out of procurements entered into in support of an award or other agreement. This includes disputes, claims, and protests of award, source evaluation or other matters of a contractual nature.

(2) Matters concerning violation of statute are to be referred to such Federal, State or local authority as may have proper jurisdiction.

(c) *Codes of conduct.* The grantee must maintain written standards of conduct governing the performance of its employees engaged in the award and administration of contracts.

(1) No employee, officer, or agent must participate in the selection, award, or administration of a contract supported by Federal funds if a real or apparent conflict of interest would be involved.

(2) Such a conflict would arise when the employee, officer, or agent, or any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in the firm selected for an award.

(3) The officers, employees, and agents of the grantee must neither solicit nor accept gratuities, favors, or anything of monetary value from contractors, or parties to sub agreements.

(4) Grantees may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value.

(5) The standards of conduct provide for disciplinary actions to be applied for violations of such standards by officers, employers, or agents of the grantees.

(d) *Competition.* All procurement transactions must be conducted in a manner to provide, to the maximum extent practical, open and free competition.

(1) The grantee must be alert to organizational conflicts of interest as well as noncompetitive practices among contractors that may restrict or eliminate competition or otherwise restrain trade.

(2) In order to ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft grant applications, or contract specifications, requirements, statements of work, invitations for bids and requests for proposals must be excluded from competing for such procurements.

(3) Awards must be made to the bidder or offer or whose bid or offer is responsive to the solicitation and is most advantageous to the grantee, price, quality, and other factors considered.

(4) Solicitations must clearly set forth all requirements that the bidder or offer or must fulfill in order for the bid or offer to be evaluated by the grantee.

(5) Any and all bids or offers may be rejected when it is in the grantee's interest to do so.

(e) *Procurement procedures.* All grantees must establish written procurement procedures. These procedures must provide, at a minimum, the following:

(1) Grantees avoid purchasing unnecessary items.

(2) When appropriate, an analysis is made of lease and purchase alternatives to determine which would be the most economical and practical procurement for the grantee and the Federal government.

(3) Solicitations for goods and services provide for all of the following:

(i) A clear and accurate description of the technical requirements for the material, product or service to be procured. In competitive procurements, such a description must not contain features which unduly restrict competition.

(ii) Requirements which the bidder or offer must fulfill and all other factors to be used in evaluating bids or proposals.

(iii) A description, whenever practicable, of technical requirements in terms of functions to be performed or performance required, including the range of acceptable characteristics or minimum acceptable standards.

(iv) The specific features of brand name or equal descriptions that bidders are required to meet when such items are included in the solicitation.

(v) The acceptance, to the extent practicable and economically feasible, of products and services dimensioned in the metric system of measurement.

(vi) Preference, to the extent practicable and economically feasible, for products and services that conserve natural resources and protect the environment and are energy efficient.

(4) Positive efforts must be made by grantees to utilize small businesses, minority-owned firms, and women's business enterprises, whenever possible. Grantees of Departmental awards must take all of the following steps to further this goal:

(i) Ensure that small businesses, minority-owned firms, and women's business enterprises are used to the fullest extent practicable.

(ii) Make information on forthcoming opportunities available and arrange time frames for purchases and contracts to encourage and facilitate participation by small businesses, minority-owned firms, and women's business enterprises.

(iii) Consider in the contract process whether firms competing for larger contracts intend to subcontract with small businesses, minority-owned firms, and women's business enterprises.

(iv) Encourage contracting with consortia of small businesses, minority-owned firms and women's business enterprises when a contract is too large for one of these firms to handle individually.

(v) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Department of Commerce's Minority Business Development Agency in the solicitation and utilization of small businesses, minority-owned firms and women's business enterprises.

(5) The type of procuring instruments used (for example, fixed price contracts, cost reimbursable contracts, purchase orders, and incentive contracts) must be determined by the grantee but must be appropriate for the particular procurement and for promoting the best interest of the program or project involved.

(6) The "cost-plus-a-percentage-of-cost" or "percentage of construction cost" methods of contracting must not be used.

(7) Contracts must be made only with responsible contractors who possess the potential ability to perform successfully under the terms and conditions of the proposed procurement.

(8) Consideration must be given to such matters as contractor integrity, record of past performance, financial and technical resources or accessibility to other necessary resources.

(9) In certain circumstances, contracts with certain parties are restricted by agencies' implementation of Executive Orders 12549 and 12689, "Debarment and Suspension" as described in 2 CFR part 376.

(10) Some form of cost or price analysis must be made and documented in the procurement files in connection with every procurement action.

(11) Price analysis may be accomplished in various ways, including the comparison of price quotations submitted, market prices, and similar indicia, together with discounts.

(12) Cost analysis is the review and evaluation of each element of cost to determine reasonableness, allocability, and allowability.

(13) Procurement records and files for purchases in excess of the simplified acquisition threshold must include the following at a minimum:

(i) Basis for contractor selection.

(ii) Justification for lack of competition when competitive bids or offers are not obtained.

(iii) Basis for award cost or price.

(f) *Contract administration.* A system for contract administration must be maintained to ensure contractor conformance with the terms, conditions and specifications of the contract and to ensure adequate and timely follow up of all purchases. Grantees must evaluate contractor performance and document, as appropriate, whether contractors have met the terms, conditions, and specifications of the contract.

(g) *Additional contract requirements.* The grantee must include, in addition to provisions to define a sound and complete agreement, the following provisions in all contracts, which must also be applied to subcontracts:

(1) Contracts in excess of the simplified acquisition threshold must contain contractual provisions or conditions that allow for administrative, contractual, or legal remedies in instances in which a contractor violates or breaches the contract terms, and provide for such remedial actions as may be appropriate.

(2) All contracts in excess of the simplified acquisition threshold (currently $100,000) must contain suitable provisions for termination by the grantee, including the manner by which termination must be effected and the basis for settlement.

(h) *Conditions for default or termination.* Such contracts must describe conditions under which the contract may be terminated for default as well as conditions where the contract may be terminated because of circumstances beyond the control of the contractor.

(i) *Access to contract materials and staff.* All negotiated contracts (except those for less than the simplified acquisition threshold) awarded by grantees must include a provision to the effect that the grantee, the Departmental awarding agency, the U.S. Comptroller General, or any of their duly authorized representatives, must have access to any books, documents, papers and records and staff of the contractor which are directly pertinent to a specific program for the purpose of making audits, examinations, excerpts and transcriptions.

§ 495.350 State Medicaid agency attestations.

(a) The State must provide assurances to HHS that amounts received with respect to sums expended that are attributable to payments to a Medicaid provider for the adoption of EHR are paid directly to such provider, or to an employer or facility to which such provider has assigned payments, without any deduction or rebate.

§ 495.352 Reporting requirements.

Each State must submit to HHS on a quarterly basis a progress report documenting specific implementation and oversight activities performed during the quarter, including progress in implementing the State's approved Medicaid HIT plan.

§ 495.354 Rules for charging equipment.

Equipment acquired under this subpart is subject to the public assistance program requirements concerning the computation of claims for Federal financial participation in accordance with the provisions of 45 CFR part 95, subpart G.

§ 495.356 Nondiscrimination requirements.

State agencies and any other recipients or subrecipients of Federal financial assistance provided under this subpart are subject to the nondiscrimination requirements in 45 CFR parts 80, 84, and 91.

(a) These regulations in 45 CFR parts 80, 84, and 91 prohibit individuals from being excluded from participation in, being denied the benefits of, or being otherwise subjected to discrimination under any program or activity which received Federal financial assistance.

(b) Specifically, 45 CFR part 80 prohibits discrimination on the basis of race, color, or national origin; 45 CFR part 84 prohibits discrimination on the basis of disability; and 45 CFR part 91 prohibits discrimination on the basis of age.

§ 495.358 Cost allocation plans.

State agencies that acquire HIT equipment and services under this subpart are subject to cost allocation plan requirements in 45 CFR part 95.

§ 495.360 Software and ownership rights.

(a) *General rule.* The State or local government must include a clause in all procurement instruments that provides that the State or local government will have all ownership rights in software or modifications thereof and associated documentation designed, developed or installed with FFP under this Subpart.

(b) *Federal license.* HHS reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish or otherwise use and to authorize others to use for Federal government purposes, the software, modifications, and documentation designed, developed or installed with FFP under this Subpart.

(c) *Proprietary software.* Proprietary operating/vendor software packages such as software that is owned and licensed for use by third parties, which are provided at established catalog or market prices and sold or leased to the general public must not be subject to the

ownership provisions in paragraphs (a) and (b) of this section.

(d) *Limitation.* Federal financial participation is not available for proprietary applications software developed specifically for the public assistance programs covered under this subpart.

§ 495.362 Retroactive approval of FFP with an effective date of February 18, 2009.

For administrative activities performed by a State, without obtaining prior approval, which are in support of planning for incentive payments to providers, a State may request consideration of FFP by recorded request in a HIT advance planning document or implementation advance planning document update. In such a consideration, the agency takes into consideration overall Federal interests which may include any of the following:

(a) The acquisition must not be before February 18, 2009.

(b) The acquisition must be reasonable, useful, and necessary.

(c) The acquisition must be attributable to payments for reasonable administrative expenses under section 1903(a)(3)(F)(ii) of the Act.

§ 495.364 Review and assessment of administrative activities and expenses of Medicaid provider health information technology adoption and operation.

(a) CMS conducts periodic reviews on an as needed basis to assess the State's progress described in its approved HIT planning advance planning document and health information technology implementation advance planning document.

(b) During planning, development, and implementation, these reviews will generally be limited to the overall progress, work performance, expenditure reports, project deliverables, and supporting documentation.

(c) CMS assesses the State's overall compliance with the approved advance planning document and provide technical assistance and information sharing from other State projects.

(d) CMS will, on a continuing basis, review, assess and inspect the planning, design, development, implementation, and operation of activities and payments for reasonable administrative expenses related to the administration of payment for Medicaid provider HIT adoption and operation payments to determine the extent to which such activities meet the following:

(1) All requirements of this subpart.

(2) The goals and objectives stated in the approved HIT implementation advance planning document and State Medicaid HIT plan.

(3) The schedule, budget, and other conditions of the approved HIT implementation advance planning document and State Medicaid HIT plan.

§ 495.366 Financial oversight and monitoring of expenditures.

(a) *General rule.* (1) The State must have a process in place to estimate expenditures for the Medicaid EHR payment incentive program using the Medicaid Budget Expenditure System.

(2) The State must have a process in place to report actual expenditures for the Medicaid EHR payment incentive program using the Medicaid Budget Expenditure System.

(3) The State must have an automated payment and information retrieval mechanized system, (Medicaid Management Information System) to make EHR payment incentives, to ensure Medicaid provider eligibility, to ensure the accuracy of payment incentives, and to identify potential improper payments.

(b) *Provider eligibility as basis for making payment.* Subject to § 495.332, the State must do all of the following:

(1) Collect and verify basic information on Medicaid providers to assure provider enrollment eligibility upon enrollment or re-enrollment to the Medicaid EHR payment incentive program.

(2) Collect and verify basic information on Medicaid providers to assure patient volume.

(3) Collect and verify basic information on Medicaid providers to assure that EPs are not hospital-based including the determination that substantially all health care services are not furnished in a hospital setting, either inpatient or outpatient.

(4) Collect and verify basic information on Medicaid providers to assure that EPs are practicing predominantly in a Federally-qualified health center or rural health clinic.

(5) Have a process in place to assure that Medicaid providers who wish to participate in the EHR incentive payment program has or will have a NPI and will choose only one program from which to receive the incentive payment using the NPI, a TIN, and CMS' national provider election database.

(c) *Meaningful use and efforts to adopt, implement, or upgrade to certified electronic health record technology to make payment.* Subject to § 495.312, 495.314, and § 495.332, the State must annually collect and verify information regarding the efforts to adopt, implement, or upgrade certified EHR technology and the meaningful use of said technology before making any payments to providers.

(d) *Claiming Federal reimbursement for State expenditures.* Subject to § 495.332, the State must do the following:

(1) Assure that State expenditures are claimed in accordance with, including but not limited to, applicable Federal laws, regulations, and policy guidance.

(2) Have a process in place to assure that expenditures for administering the Medicaid EHR incentive payment program will not be claimed at amounts higher than 90 percent of the cost of such administration.

(3) Have a process in place to assure that expenditures for payment of Medicaid EHR incentive payments will not be claimed at amounts higher than 100 percent of the cost of such payments to Medicaid providers.

(e) *Improper Medicaid electronic health record payment incentives.*

(1) Subject to § 495.332, the State must have a process in place to assure that no duplicate Medicaid EHR payment incentives are paid between the Medicare and Medicaid programs, or paid by more than one State even if the provider is licensed to practice in multiple States, or paid within more than one area of a State.

(2) Subject to § 495.332, the State must have a process in place to assure that Medicaid EHR incentive payments are made without reduction or rebate, have been paid directly to an eligible provider or to an employer, a facility, or an eligible third-party entity to which the Medicaid eligible provider has assigned payments.

(3) Subject to § 495.332, the State must have a process in place to assure that that Medicaid EHR incentive payments are made for no more than 6 years; that no EP or eligible hospital begins receiving payments after 2016; that incentive payments cease after 2021; and that an eligible hospital does not receive incentive payments after FY 2016 unless the hospital received an incentive payment in the prior fiscal year.

(4) Subject to § 495.332, the State must have a process in place to assure that only appropriate funding sources are used to make Medicaid EHR incentive payments.

(5) Subject to § 495.332, the State must have a process in place to assure that Medicaid EHR incentive payments are not paid at amounts higher than 85 percent of the net average allowable cost of certified EHR technology and the yearly maximum allowable payment thresholds.

(6) Subject to § 495.332, the State must have a process in place to assure that for those entities promoting the adoption of EHR technology, the

Medicaid EHR incentive payments are paid on a voluntary basis and that these entities do not retain more than 5 percent of such payments for costs not related to certified EHR technology.

(7) Subject to § 495.332, the State must have a process in place to assure that any existing fiscal relationships with providers to disburse the incentive through Medicaid managed care plans does not exceed 105 percent of the capitation rate, in order to comply with the Medicaid managed care incentive payment rules at § 438.6(c)(5)(iii) of this chapter and a methodology for verifying such information.

(8) The State must not request reimbursement for Federal financial participation unless all requirements of this subpart have been satisfied.

§ 495.368 Combating fraud and abuse.

(a) *General rule.* (1) The State must comply with Federal requirements to—

(i) Ensure the qualifications of the providers who request Medicaid EHR incentive payments;

(ii) Detect improper payments; and

(iii) In accordance with § 455.15 and § 455.21 of this chapter, refer suspected cases of fraud and abuse to the Medicaid Fraud Control Unit.

(2) The State must take corrective action in the case of improper EHR payment incentives to Medicaid providers.

(b) *Providers' statements regarding submission of documentation containing falsification or concealment of a material fact on EHR incentive payment documentation.* For any forms on which a provider submits information necessary to the determination of eligibility to receive EHR payments, the State must obtain a statement that meets the following requirements:

(1) Is signed by the provider and contains the following statement: "This is to certify that the foregoing information is true, accurate, and complete. I understand that Medicaid EHR incentive payments submitted under this provider number will be from Federal funds, and that any falsification, or concealment of a material fact may be prosecuted under Federal and State laws."

(2) Appears directly above the claimant's signature, or if it is printed on the reverse of the form, a reference to the statements must appear immediately preceding the provider's signature.

(3) Is resubmitted upon a change in provider representative.

(4) Is updated as needed.

(c) *Overpayments.* States must repay to CMS all Federal financial participation received by providers identified as an overpayment regardless of recoupment from such providers, within 60 days of discovery of the overpayment, in accordance with sections 1903(a)(1), (d)(2), and (d)(3) of the Act and part 433 subpart F of the regulations.

(d) *Complying with Federal laws and regulations.* States must comply with all Federal laws and regulations designed to prevent fraud, waste, and abuse, including, but not limited to applicable provisions of Federal criminal law, the False Claims Act (32 U.S.C. 3729 et seq.), and the anti-kickback statute (section 1128B(b) of the Act).

§ 495.370 Appeals process for a Medicaid provider receiving electronic health record incentive payments.

(a) The State must have a process in place consistent with the requirements established in § 447.253(e) of this chapter for a provider or entity to appeal the following issues related to the HIT incentives payment program:

(1) Incentive payments.

(2) Incentive payment amounts.

(3) Provider eligibility determinations.

(4) Demonstration of adopting, implementing, and upgrading, and meaningful use eligibility for incentives under this subpart.

(b) Subject to paragraph (a) of this section, the State's process must ensure the following:

(1) That the provider (whether an individual or an entity) has an opportunity to challenge the State's determination under this Part by submitting documents or data or both to support the provider's claim.

(2) That such process employs methods for conducting an appeal that are consistent with the State's Administrative Procedure law(s).

(c) The State must provide that the provider (whether individual or entity) is also given any additional appeals rights that would otherwise be available under procedures established by the State.

Authority: Catalog of Federal Domestic Assistance Program No. 93.773, Medicare—Hospital Insurance; and Program No. 93.774, Medicare—Supplementary Medical Insurance Program, Program No. 93.778, Medical Assistance Program.

Dated: June 16, 2010.

Marilyn Tavenner,

Acting Administrator, Centers for Medicare & Medicaid Services.

Approved: July 9, 2010.

Kathleen Sebelius,

Secretary.

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Exhibit V.2 (Stage 2 Meaningful Use Criteria Regulations)

to the

Electronic Health Records System and Services Agreement

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Part II

Department of Health and Human Services

45 CFR Part 170

Centers for Medicare & Medicaid Services

42 CFR Parts 412, 413, and 495

Medicare and Medicaid Programs; Electronic Health Record Incentive Program—Stage 2; Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition; Revisions to the Permanent Certification Program for Health Information Technology; Final Rules

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Parts 412, 413, and 495

[CMS–0044–F]

RIN 0938–AQ84

Medicare and Medicaid Programs; Electronic Health Record Incentive Program—Stage 2

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Final rule.

SUMMARY: This final rule specifies the Stage 2 criteria that eligible professionals (EPs), eligible hospitals, and critical access hospitals (CAHs) must meet in order to qualify for Medicare and/or Medicaid electronic health record (EHR) incentive payments. In addition, it specifies payment adjustments under Medicare for covered professional services and hospital services provided by EPs, eligible hospitals, and CAHs failing to demonstrate meaningful use of certified EHR technology (CEHRT) and other program participation requirements. This final rule revises certain Stage 1 criteria, as finalized in the July 28, 2010 final rule, as well as criteria that apply regardless of Stage.

DATES: *Effective dates:* This final rule is effective on November 5, 2012, with the exception of the definition of ''meaningful EHR user'' in § 495.4 and the provisions in § 495.6(f), § 495.6(g), § 495.8, § 495.102(c), and part 495 subpart D, which are effective September 4, 2012.

Applicability dates: Sections 495.302, 495.304, and 495.306 are applicable beginning payment year 2013.

FOR FURTHER INFORMATION CONTACT: Elizabeth Holland, (410) 786–1309, or Robert Anthony, (410) 786–6183, EHR Incentive Program issues or Administrative appeals process issues. David Koppel, (410) 786–3255, for Medicaid Incentive Program issues. Frank Szeflinski, (303) 844–7119, for Medicare Advantage issues. Travis Broome, (214) 767–4450, Medicare payment adjustment issues. Douglas Brown, (410) 786–0028, or Maria Michaels, (410) 786–2809 for Clinical quality measures issues.

SUPPLEMENTARY INFORMATION:

Acronyms

ARRA American Recovery and Reinvestment Act of 2009
AAC Average Allowable Cost (of CEHRT)
ACO Accountable Care Organization
AIU Adopt, Implement, Upgrade (CEHRT)
CAH Critical Access Hospital
CAHPS Consumer Assessment of Healthcare Providers and Systems
CCN CMS Certification Number
CDS Clinical Decision Support
CEHRT Certified Electronic Health Record Technology
CFR Code of Federal Regulations
CHIP Children's Health Insurance Program
CHIPRA Children's Health Insurance Program Reauthorization Act of 2009
CMS Centers for Medicare & Medicaid Services
CPOE Computerized Provider Order Entry
CQM Clinical Quality Measure
CY Calendar Year
EHR Electronic Health Record
EP Eligible Professional
EPO Exclusive Provider Organization
FACA Federal Advisory Committee Act
FFP Federal Financial Participation
FFY Federal Fiscal Year
FFS Fee-For-Service
FQHC Federally Qualified Health Center
FTE Full-Time Equivalent
FY Fiscal Year
HEDIS Healthcare Effectiveness Data and Information Set
HHS Department of Health and Human Services
HIE Health Information Exchange
HIT Health Information Technology
HITPC Health Information Technology Policy Committee
HIPAA Health Insurance Portability and Accountability Act of 1996
HITECH Health Information Technology for Economic and Clinical Health Act
HMO Health Maintenance Organization
HOS Health Outcomes Survey
HPSA Health Professional Shortage Area
HRSA Health Resource and Services Administration
IAPD Implementation Advance Planning Document
ICR Information Collection Requirement
IHS Indian Health Service
IPA Independent Practice Association
IT Information Technology
LOINC Logical Observation Identifiers and Codes System
MA Medicare Advantage
MAC Medicare Administrative Contractor
MAO Medicare Advantage Organization
MCO Managed Care Organization
MITA Medicaid Information Technology Architecture
MMIS Medicaid Management Information Systems
MSA Medical Savings Account
NAAC Net Average Allowable Cost (of CEHRT)
NCQA National Committee for Quality Assurance
NCVHS National Committee on Vital and Health Statistics
NPI National Provider Identifier
NPRM Notice of Proposed Rulemaking
ONC Office of the National Coordinator for Health Information Technology
PAHP Prepaid Ambulatory Health Plan
PAPD Planning Advance Planning Document
PCP Primary Care Provider
PECOS Provider Enrollment, Chain, and Ownership System
PFFS Private Fee-For-Service
PHO Physician Hospital Organization
PHR Personal Health Record
PHS Public Health Service
PHSA Public Health Service Act
PIHP Prepaid Inpatient Health Plan
POS Place of Service
PPO Preferred Provider Organization
PQRS Physician Quality Reporting System
PSO Provider Sponsored Organization
RHC Rural Health Clinic
RPPO Regional Preferred Provider Organization
SAMHSA Substance Abuse and Mental Health Services Administration
SMHP State Medicaid Health Information Technology Plan
TIN Tax Identification Number

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Regulations Text

I. Executive Summary and Overview

A. Executive Summary

1. Purpose of Regulatory Action

a. Rationale for the Regulatory Action

In this final rule the Secretary of the Department of Health and Human Services (the Secretary) will specify Stage 2 criteria beginning in 2014 that eligible professionals (EPs), eligible hospitals, and critical access hospitals (CAHs) must meet in order to qualify for an incentive payment, as well as introduce changes to the program timeline and detail Medicare payment adjustments. Recommendations on Stage 2 criteria from the Health IT

Policy Committee (HITPC), a Federal Advisory Committee that coordinates industry and provider input regarding the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs were substantially adopted, with consideration of current program data for the Medicare and Medicaid EHR Incentive Programs. Our current program data is derived from two sources. First, data elements from the registration and attestation process of those providers who have already registered and attested to Stage 1 of meaningful use. This includes demographic information about the provider, the Certified EHR Technology (CEHRT) used by the provider and their performance on the meaningful use objectives and measures. Second, we have information from thousands of questions providers submitted about the EHR Incentive Programs. These questions provide insights into the difficulties faced by providers and also into the areas of the EHR Incentive Programs that warrant additional clarification.

b. Legal Authority for the Regulatory Action

The American Recovery and Reinvestment Act of 2009 (ARRA) (Pub. L. 111–5) amended Titles XVIII and XIX of the Social Security Act (the Act) to authorize incentive payments to EPs, eligible hospitals, and CAHs, and Medicare Advantage (MA) organizations to promote the adoption and meaningful use of CEHRT.

Sections 1848(o), 1853(l) and (m), 1886(n), and 1814(l) of the Act provide the statutory basis for the Medicare incentive payments made to meaningful EHR users. These statutory provisions govern EPs, Medicare Advantage (MA) organizations (for certain qualifying EPs and hospitals that meaningfully use CEHRT), subsection (d) hospitals and critical access hospitals (CAHs) respectively. Sections 1848(a)(7), 1853(l) and (m), 1886(b)(3)(B), and 1814(l) of the Act also establish downward payment adjustments, beginning with calendar or fiscal year 2015, for EPs, MA organizations, subsection (d) hospitals and CAHs that are not meaningful users of CEHRT for certain associated reporting periods.

Sections 1903(a)(3)(F) and 1903(t) of the Act provide the statutory basis for Medicaid incentive payments. (There are no payment adjustments under Medicaid). For a more detailed explanation of the statutory basis for the EHR incentive payments, see the Stage 1 final rule (75 FR 44316 through 44317).

2. Summary of Major Provisions

a. Stage 2 Meaningful Use Objectives and Measures

In the Stage 1 final rule we outlined Stage 1 meaningful use criteria, we finalized a separate set of core objectives and menu objectives for EPs, eligible hospitals and CAHs. EPs and hospitals must meet the measure or qualify for an exclusion to all 15 core objectives and 5 out of the 10 menu objectives in order to qualify for an EHR incentive payment. In this final rule, we maintain the same core-menu structure for the program for Stage 2. We are finalizing that EPs must meet the measure or qualify for an exclusion to 17 core objectives and 3 of 6 menu objectives. We are finalizing that eligible hospitals and CAHs must meet the measure or qualify for an exclusion to 16 core objectives and 3 of 6 menu objectives. Nearly all of the Stage 1 core and menu objectives are retained for Stage 2. The ''exchange of key clinical information'' core objective from Stage 1 was re-evaluated in favor of a more robust ''transitions of care'' core objective in Stage 2, and the ''Provide patients with an electronic copy of their health information'' objective was removed because it was replaced by a ''view online, download, and transmit'' core objective. There are also multiple Stage 1 objectives that were combined into more unified Stage 2 objectives, with a subsequent rise in the measure threshold that providers must achieve for each objective that has been retained from Stage 1.

b. Reporting on Clinical Quality Measures (CQMs)

EPs, eligible hospitals, and CAHs are required to report on specified clinical quality measures in order to qualify for incentive payments under the Medicare and Medicaid EHR Incentive Programs. This final rule outlines a process by which EPs, eligible hospitals, and CAHs will submit CQM data electronically, reducing the associated burden of reporting on quality measures for providers. EPs will submit 9 CQMs from at least 3 of the National Quality Strategy domains out of a potential list of 64 CQMs across 6 domains. We are recommending a core set of 9 CQMs focusing on adult populations with a particular focus on controlling blood pressure. We are also recommending a core set of 9 CQMs for pediatric populations. EPs should report on these recommended CQMs if they are representative of their clinical practice and patient population. Eligible hospitals and CAHs will submit 16 CQMs from at least 3 of the National Quality Strategy domains out of a potential list of 29 CQMs across 6 domains. For the Medicare EHR Incentive Program, EPs, eligible hospitals, and CAHs in their first year of demonstrating meaningful use must submit their CQM data via attestation, and those beyond their first year must submit their CQM data electronically via a CMS-designated transmission method. For EPs, this includes an aggregate electronic submission or a patient-level electronic submission through the method specified by the Physician Quality Reporting System (PQRS) that would provide one submission for credit in both the PQRS and Medicare EHR Incentive Program. For eligible hospitals and CAHs, this includes an aggregate electronic submission or a patient-level data submission through the method similar to the Medicare EHR Incentive Program Electronic Reporting Pilot, which is proposed for extension in the CY 2013 Hospital Outpatient Prospective Payment System (OPPS) proposed rule (July 30, 2012, 77 FR 45188). For electronic submissions, patient-level data must be submitted using the Quality Reporting Data Architecture (QRDA) Category I format, and aggregate-level data must be submitted using the QRDA Category III format.

c. Payment Adjustments and Exceptions

Medicare payment adjustments are required by statute to take effect in 2015. We are finalizing a process by which payment adjustments will be determined by a prior reporting period. Therefore, we specify that EPs and eligible hospitals that are meaningful EHR users in 2013 will avoid payment adjustment in 2015. Also, if such providers first meet meaningful use in 2014, they will avoid the 2015 payment adjustment, if they are able to demonstrate meaningful use at least 3 months prior to the end of the calendar (for EPs) or fiscal year (for eligible hospitals) and meet the registration and attestation requirement by July 1, 2014 (for eligible hospitals) or October 1, 2014 (for EPs).

We also are finalizing exceptions to these payment adjustments. This final rule outlines four categories of exceptions based on (1) the lack of availability of internet access or barriers to obtaining IT infrastructure; (2) a time-limited exception for newly practicing EPs or new hospitals that will not otherwise be able to avoid payment adjustments; (3) unforeseen circumstances such as natural disasters that will be handled on a case-by-case basis; and (4) (EP only) exceptions due to a combination of clinical features

limiting a provider's interaction with patients or, if the EP practices at multiple locations, lack of control over the availability of CEHRT at practice locations constituting 50 percent or more of their encounters.

d. Modifications to Medicaid EHR Incentive Program

We are expanding the definition of what constitutes a Medicaid patient encounter, which is a required eligibility threshold for the Medicaid EHR Incentive Programs. We include encounters for individuals enrolled in a Medicaid program, including Title XXI-funded Medicaid expansion encounters (but not separate Children's Health Insurance Programs (CHIPs)). We also specify flexibility in the lookback period for patient volume to be over the 12 months preceding attestation, not tied to the prior calendar year.

We are also making eligible approximately 12 additional children's hospitals that have not been able to participate to date, despite meeting all other eligibility criteria, because they do not have a CMS Certification Number since they do not bill Medicare.

These changes would take effect beginning with payment year 2013.

e. Stage 2 Timeline Delay

Lastly, we are finalizing a delay in the implementation of the onset of Stage 2 criteria. In the Stage 1 final rule, we established that any provider who first attested to Stage 1 criteria in 2011 would begin using Stage 2 criteria in 2013. This final rule delays the onset of those Stage 2 criteria until 2014, which we believe provides the needed time for vendors to develop CEHRT. We are also introducing a special 3-month EHR reporting period, rather than a full year of reporting, for providers attesting to either Stage 1 or Stage 2 in 2014 in order to allow time for providers to implement newly certified CEHRT. In future years, providers who are not in their initial year of demonstrating meaningful use must meet criteria for 12-month reporting periods. The 3-month reporting period allows providers flexibility in their first year of meeting Stage 2 without warranting any delay for Stage 3. This policy is consistent with CMS's commitment to ensure that Stage 3 occurs on schedule (implemented by 2016).

3. Summary of Costs and Benefits

This final rule is anticipated to have an annual effect on the economy of $100 million or more, making it an economically significant rule under the Executive Order and a major rule under the Congressional Review Act. Accordingly, we have prepared a Regulatory Impact Analysis that to the best of our ability presents the costs and benefits of the final rule. The total Federal cost of the Medicare and Medicaid EHR Incentive Programs between 2014 and 2019 is estimated to be $15.4 billion (these estimates include net payment adjustments for Medicare providers who do not achieve meaningful use in 2015 and subsequent years in the amount of $2.1 billion). In this final rule we have not quantified the overall benefits to the industry, nor to EPs, eligible hospitals, or CAHs participating in the Medicare and Medicaid EHR Incentive Programs. Information on the costs and benefits of adopting systems specifically meeting the requirements for the EHR Incentive Programs has not yet been collected and information on costs and benefits overall is limited. Nonetheless, we believe there are substantial benefits that can be obtained by eligible hospitals and EPs, including reductions in medical recordkeeping costs, reductions in repeat tests, decreases in length of stay, increased patient safety, and reduced medical errors. There is evidence to support the cost-saving benefits anticipated from wider adoption of EHRs.

TABLE 1—ESTIMATED EHR INCENTIVE PAYMENTS AND BENEFITS IMPACTS ON THE MEDICARE AND MEDICAID PROGRAMS OF THE HITECH EHR INCENTIVE PROGRAM. (FISCAL YEAR)—(IN BILLIONS)

Fiscal year	Medicare eligible		Medicaid eligible		Total
	Hospitals	Professionals	Hospitals	Professionals	
2014	$2.1	$1.9	$0.6	$0.5	$5.10
2015	1.8	1.9	0.4	0.8	4.90
2016	1.2	0.6	0.5	0.8	3.10
2017	0.2	0.1	0.5	0.7	1.50
2018	−0.1	−0.2	0.1	0.7	0.50
2019	0.0	−0.2	0.0	0.5	0.30

B. Overview of the HITECH Programs Created by the American Recovery and Reinvestment Act of 2009

The American Recovery and Reinvestment Act of 2009 (ARRA) (Pub. L. 111–5) amended Titles XVIII and XIX of the Social Security Act (the Act) to authorize incentive payments to EPs, eligible hospitals, and CAHs, and Medicare Advantage (MA) Organizations to promote the adoption and meaningful use of CEHRT. In the July 28, 2010 **Federal Register** (75 FR 44313 through 44588) we published a final rule entitled ''Medicare and Medicaid Programs; Electronic Health Record Incentive Program,'' that specified the Stage 1 criteria that EPs, eligible hospitals, and CAHs must meet in order to qualify for an incentive payment, calculation of the incentive payment amounts, and other program participation requirements (hereinafter referred to as the Stage 1 final rule). (For a full explanation of the amendments made by ARRA, see the Stage 1 final rule (75 FR 44316).) In that final rule, we also detailed that the Medicare and Medicaid EHR Incentive Programs will consist of 3 different stages of meaningful use requirements.

For Stage 1, CMS and the Office of the National Coordinator for Health Information Technology (ONC) worked closely to ensure that the definition of meaningful use of CEHRT and the standards and certification criteria for CEHRT were coordinated. Current ONC regulations may be found at 45 CFR part 170.

For Stage 2, CMS and ONC again worked together to align our regulations.

In the March 7, 2012 **Federal Register** (77 FR 13698), we published a proposed rule that specified the potential Stage 2 criteria that EPs, eligible hospitals, and CAHs would have to meet in order to qualify for Medicare and/or Medicaid EHR incentive payments (hereinafter referred to as the Stage 2 proposed rule). In addition, the proposed rule —(1) proposed payment adjustments under Medicare for covered professional services and hospital services provided

by EPs, eligible hospitals, and CAHs failing to demonstrate meaningful use of CEHRT and other program participation requirements; and (2) proposed the revision of certain Stage 1 criteria, as well as criteria that apply regardless of stage.

In the April 18, 2012 **Federal Register** (77 FR 23193), we published a document that corrected typographical and technical errors in the March 7, 2012 Stage 2 proposed rule.

Simultaneously in the March 7, 2012 **Federal Register** (77 FR 13832), ONC published its notice of proposed rulemaking titled Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition; Revisions to the Permanent Certification Program for Health Information Technology. The notice of proposed rulemaking proposed revisions to the initial set of standards, implementation specifications, and certification criteria in ONC's July 28, 2010 final rule as well as the adoption of new standards, implementation specifications, and certification criteria.

We urge those interested in this final rule to also review the ONC final rule on standards and implementation specifications for CEHRT. Readers may also visit *http://www.cms.hhs.gov/EHRincentiveprograms* and *http://healthit.hhs.gov* for more information on the efforts at the Department of Health and Human Services (HHS) to advance HIT initiatives.

II. Provisions of the Proposed Regulations and Analysis of and Responses to Public Comments

We received approximately 6,100 items of timely correspondence in response to our Stage 2 proposed rule published in the March 7, 2012 **Federal Register**. We received some comments that were outside the scope of the proposed rule and therefore are not addressed in this final rule. Summaries of the timely public comments that are within the scope of the Stage 2 proposed rule and our responses to those comments are set forth in the various sections of this final rule under the appropriate headings. We have generally organized those sections by stating our proposals, summarizing and responding to the timely public comments received, and describing our final policy.

A. Definitions Across the Medicare FFS, Medicare Advantage, and Medicaid Programs

1. Uniform Definitions

As discussed in the proposed rule, in the Stage 1 final rule, we finalized many uniform definitions for the Medicare FFS, Medicare Advantage (MA), and Medicaid EHR incentive programs. These definitions are set forth in part 495 subpart A of the regulations, and we proposed to maintain most of these definitions, including, for example, ''Certified EHR Technology (CEHRT),'' ''Qualified EHR,'' ''Payment Year,'' and ''First, Second, Third, Fourth, Fifth, and Sixth Payment Year.'' We noted in the Stage 2 proposed rule that our definitions of ''CEHRT'' and ''Qualified EHR'' incorporate the definitions adopted by ONC, and to the extent that ONC's definitions are revised, our definitions would also incorporate those changes. For these definitions, we refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register**.

We did not receive any comments on our proposal and will continue to use the existing definitions in part 495 subpart A, except where stated otherwise in this final rule.

We stated that we would revise the descriptions of the EHR reporting period to clarify that providers who are demonstrating meaningful use for the first time would have an EHR reporting period of 90 days regardless of payment year. We proposed to add definitions for the applicable EHR reporting period that would be used in determining the payment adjustments, as well as a definition of a payment adjustment year.

A summary of the comments pertaining to the EHR reporting period, the applicable EHR reporting period for determining the payment adjustments, and the definition of a payment adjustment year, as well as our responses to those comments, can be found in sections II.A.3.a and II.D.2 of this final rule.

2. Meaningful EHR User

We proposed to include clinical quality measure reporting as part of the definition of ''meaningful EHR user'' under § 495.4 instead of as a separate meaningful use objective under § 495.6.

Comment: A few commenters suggested that this change would create confusion, but the majority supported this change to alleviate confusion caused by the current situation. Many comments discussed the specifics of clinical quality measures.

Response: We appreciate the support expressed for the proposal. We continue to believe that separating clinical quality measures from the meaningful use objectives and measures in § 495.6 will reduce confusion and finalize the change as proposed. We address comments on the specifics of clinical quality measures in section II.B of this final rule. While clinical quality measure reporting will no longer be listed as a separate objective and measure in § 495.6, as it is now incorporated in the definition of meaningful EHR user in § 495.4, it remains a condition for demonstrating meaningful use.

We proposed to revise the third paragraph of the definition of meaningful EHR user at § 495.4 to refer specifically to the payment adjustments and read as follows: ''(3) To be considered a meaningful EHR user, at least 50 percent of an EP's patient encounters during an EHR reporting period for a payment year (or during an applicable EHR reporting period for a payment adjustment year) must occur at a practice/location or practices/locations equipped with CEHRT.'' We did not receive any comments on this revision and we are finalizing it as proposed.

3. Definition of Meaningful Use

a. Considerations in Defining Meaningful Use

In sections 1848(o)(2)(A) and 1886(n)(3)(A) of the Act, the Congress identified the broad goal of expanding the use of EHRs through the concept of meaningful use. Section 1903(t)(6)(C) of the Act also requires that Medicaid providers adopt, implement, upgrade or meaningfully use CEHRT if they are to receive incentives under Title XIX. CEHRT used in a meaningful way is one piece of the broader HIT infrastructure needed to reform the health care system and improve health care quality, efficiency, and patient safety. This vision of reforming the health care system and improving health care quality, efficiency, and patient safety should inform the definition of meaningful use.

As we explained in our Stage 1 meaningful use rule and again in our Stage 2 proposed rule, we seek to balance the sometimes competing considerations of health system advancement (for example, improving health care quality, encouraging widespread EHR adoption, promoting innovation) and minimizing burdens on health care providers given the short timeframe available under the HITECH Act.

Based on public and stakeholder input received during our Stage 1 rule, we laid out a phased approach to meaningful use. Such a phased approach encompasses reasonable criteria for meaningful use based on currently available technology capabilities and provider practice experience, and builds up to a more robust definition of meaningful use as technology and capabilities evolve. The HITECH Act acknowledges the need for this balance by granting the Secretary the discretion to require more stringent measures of meaningful use over time. Ultimately, consistent with other provisions of law, meaningful use of CEHRT should result in health care that is patient centered, evidence-based, prevention-oriented, efficient, and equitable.

Under this phased approach to meaningful use, we update the criteria of meaningful use through staggered rulemaking. We published the Stage 1 final rule (75 FR 44314) on July 28, 2010, and this rule finalizes the criteria and other requirements for Stage 2. We currently are planning at least one additional update, and anticipate finalizing the Stage 3 criteria through additional rulemaking in early 2014 with Stage 3 starting in 2016. The stages represent an initial graduated approach to arriving at the ultimate goal.

- The Stage 1 meaningful use criteria, consistent with other provisions of Medicare and Medicaid law, focused on electronically capturing health information in a structured format; using that information to track key clinical conditions and communicating that information for care coordination purposes (whether that information is structured or unstructured, but in structured format whenever feasible); implementing clinical decision support tools to facilitate disease and medication management; using EHRs to engage patients and families and reporting clinical quality measures and public health information. Stage 1 focused heavily on establishing the functionalities in CEHRT that will allow for continuous quality improvement and ease of information exchange. By having these functionalities in CEHRT at the onset of the program and requiring that the EP, eligible hospital or CAH become familiar with them through the varying levels of engagement required by Stage 1, we believe we created a strong foundation to build on in later years. Though some functionalities were optional in Stage 1, all of the functionalities are considered crucial to maximize the value to the health care system provided by CEHRT. We encouraged all EPs, eligible hospitals and CAHs to be proactive in implementing all of the functionalities of Stage 1 in order to prepare for later stages of meaningful use, particularly functionalities that improve patient care, the efficiency of the health care system and public and population health. The specific criteria for Stage 1 of meaningful use are discussed in the Stage 1 final rule, published on July 28, 2010 (75 FR 44314 through 44588). We are finalizing certain changes to the Stage 1 criteria in section II.A.3.b. of this final rule.
- Stage 2: We stated in the Stage 2 proposed rule that our Stage 2 goals, consistent with other provisions of Medicare and Medicaid law, would expand upon the Stage 1 criteria with a focus on ensuring that the meaningful use of EHRs supports the aims and priorities of the National Quality Strategy. Specifically, Stage 2 meaningful use criteria would encourage the use of health IT for continuous quality improvement at the point of care and the exchange of information in the most structured format possible. Our proposed Stage 2 meaningful use requirements included rigorous expectations for health information exchange including: more demanding requirements for e-prescribing; incorporating structured laboratory results; and the expectation that providers will electronically transmit patient care summaries with each other and with the patient to support transitions in care. Increasingly robust expectations for health information exchange in Stage 2 and Stage 3 would support the goal that information follows the patient. In addition, as we forecasted in the Stage 1 final rule, we proposed that nearly every objective that was optional for Stage 1 would be part of the core for Stage 2.
- Stage 3: We anticipate that Stage 3 meaningful use criteria will focus on: promoting improvements in quality, safety and efficiency leading to improved health outcomes; focusing on decision support for national high priority conditions; patient access to self-management tools; access to comprehensive patient data through robust, secure, patient-centered health information exchange; and improving population health. For Stage 3, we currently intend to propose higher standards for meeting meaningful use. For example, we intend to propose that every objective in the menu set for Stage 2 be included in Stage 3 as part of the core set. While the use of a menu set allows providers flexibility in setting priorities for EHR implementation and takes into account their unique circumstances, we maintain that all of the objectives are crucial to building a strong foundation for health IT and to meeting the objectives of the HITECH Act. In addition, as the capabilities of HIT infrastructure increase, we may raise the thresholds for these objectives in both Stage 2 and Stage 3.

In the Stage 1 final rule (75 FR 44323), we published the following Table 2 with our expected timeline for the stages of meaningful use.

TABLE 2—STAGE OF MEANINGFUL USE CRITERIA BY PAYMENT YEAR AS FINALIZED IN 2010

First payment year	Payment year				
	2011	2012	2013	2014	2015
2011	Stage 1	Stage 1	Stage 2	Stage 2	TBD
2012		Stage 1	Stage 1	Stage 2	TBD
2013			Stage 1	Stage 1	TBD
2014				Stage 1	TBD

We proposed changes to this timeline as well as its extension beyond 2014. As we explained in the Stage 2 proposed rule, under the timeline used in Table 2, an EP, eligible hospital, or CAH that became a meaningful EHR user for the first time in 2011 would need to begin their EHR reporting period for Stage 2 on January 1, 2013 (EP) or October 1, 2012 (eligible hospital or CAH). The HITPC recommended we delay by 1 year the start of Stage 2 for providers who became meaningful EHR users in 2011. We stated in the proposed rule that Stage 2 of meaningful use would require changes to both technology and workflow that cannot reasonably be expected to be completed in the time

between the publication of the final rule and the start of the EHR reporting periods as listed in Table 2. We noted the similar concerns we have heard from other stakeholders and agreed that, based on our proposed definition of meaningful use for Stage 2, providers could have difficulty implementing these changes in time. Therefore, we proposed a 1-year extension of Stage 1 of meaningful use for providers who successfully demonstrated meaningful use for 2011. Our proposed timeline through 2021, which we finalize in this rule with a notation of the special EHR reporting period in 2014, is displayed in Table 3. We refer readers to section II.D.2 of this final rule for a discussion of the applicable EHR reporting period that will be used to determine whether providers are subject to payment adjustments.

TABLE 3—STAGE OF MEANINGFUL USE CRITERIA BY FIRST PAYMENT YEAR

First payment year	Stage of meaningful use										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2011	1	1	1	*2	2	3	3	TBD	TBD	TBD	TBD
2012	.....	1	1	*2	2	3	3	TBD	TBD	TBD	TBD
2013	.....	.....	1	*1	2	2	3	3	TBD	TBD	TBD
2014	.....	.....	.....	*1	1	2	2	3	3	TBD	TBD
2015	.....	.....	.....	.....	1	1	2	2	3	3	TBD
2016	.....	.....	.....	.....	.....	1	1	2	2	3	3
2017	.....	.....	.....	.....	.....	.....	1	1	2	2	3

*3-month quarter EHR reporting period for Medicare and continuous 90-day EHR reporting period (or 3 months at state option) for Medicaid EPs. All providers in their first year in 2014 use any continuous 90-day EHR reporting period.

We explained in the proposed rule that the Medicare EHR incentive program and the Medicaid EHR incentive program have different rules regarding the number of payment years available, the last year for which incentives may be received, and the last payment year for initiating the program. The last year for which an EP and an eligible hospital or CAH can begin receiving Medicare incentive payments is 2014 and 2015 respectively. These providers would begin in Stage 1 of meaningful use. Medicaid EPs and eligible hospitals can receive a Medicaid EHR incentive payment for ''adopting, implementing, and upgrading'' (AIU) to CEHRT for their first payment year, which is not reflected in Table 3. For example, a Medicaid EP who earns an incentive payment for AIU in 2013 would have to meet Stage 1 of meaningful use in his or her next 2 payment years (2014 and 2015). The applicable payment years and the incentive payments available for each program are discussed in the Stage 1 final rule.

If we anticipate future criteria beyond Stage 3 of meaningful use, we expect to update Table 3 in the rulemaking for Stage 3, which remains on schedule for implementation in 2016.

Comment: We received numerous comments, which represented a significant majority of all comments received, on the timing of the stages of meaningful use. Commenters asserted that the timeline is too aggressive and will result in many providers being unable to meet Stage 2 of meaningful use, particularly those who first attested in 2011 and 2012. The most common justification for this claim was the lack of sufficient time between the publication of this final rule and the time when a provider who first attested to meaningful use in 2011 or 2012 would have to begin Stage 2 of meaningful use. Some commenters suggested that the time was insufficient regardless of resource constraints, while others suggested that currently vendors of CEHRT lack the necessary capacity to make the necessary upgrades to their CEHRT products and implement them for their customers in time. Commenters also pointed to competing priorities and demands on provider time and resources, such as the transition to ICD–10, the various programs and policies under the Affordable Care Act and other priorities that diminish the time and resources that can be devoted to reaching Stage 2 of meaningful use. Commenters offered several suggestions on how to increase the time available between publication of this final rule and the EHR reporting periods in 2014. The suggestions included using a shorter than full year EHR reporting period in 2014, delaying the start of Stage 2 until 2015 and using a shorter than full year EHR reporting period in 2015, and delaying the start of Stage 2 until 2015 with a full year EHR reporting period. Several commenters suggested a minimum of 18 months is needed, while others suggested longer periods.

Response: While our proposal would provide more than a year between the publication of this final rule and the first day any provider would start their EHR reporting period in 2014 for any stage of meaningful use, we agree that additional time to demonstrate meaningful use in 2014 would be helpful to providers, many of whom will need to upgrade to new technology as well as ensure they are able to meet all of the objectives and measures for Stage 2. In considering what would be an appropriate length of time between publication of this final rule and the start of the EHR reporting periods for providers in 2014 for either Stage 2 or Stage 1, we weighed two primary factors against the comments calling for a delay. The first is that by delaying Stage 2 until 2015, the movement towards improved outcomes that is the main goal of meaningful use would be put off by a full year. This full-year delay would have a ripple effect through the timeline of the stages as providers move along their own timelines across the stages of meaningful use. For this reason, we will not delay Stage 2 until 2015, but instead we are using a 3-month EHR reporting period in 2014 as the first year any provider would attest to Stage 2. The second consideration is the data integrity of meaningful use attestations and clinical quality measure submissions, especially as it relates to our efforts towards alignment with other programs such as PQRS, Medicare Shared Savings Program (SSP), and potentially others. The more robust data set provided by a full year reporting period offers more opportunity for alignment than the data set provided by a shorter reporting period, especially compared across years. By altering the reporting period from year to year the data is less comparable from year to year. However, we agree with commenters that the use of a shorter EHR reporting period in 2014 is necessary to allow sufficient time for vendors to upgrade their CEHRT and for

providers to implement it. In an effort to preserve some data validity with similar Medicare quality measurement programs, we are finalizing 3-month quarter EHR reporting periods in 2014 for certain providers that are beyond their first year of meaningful use, rather than any continuous 90-day period within the year as for first-time meaningful users. For more information on alignment with other programs, we refer readers to our discussion on clinical quality measures (see section II.B.1. of this final rule).

While commenters generally suggested a shorter EHR reporting period for the start of Stage 2 in any year rather than just Stage 2 in 2014, we believe that most of the reasons for a shorter period are due to the time constraints for vendor certification, upgrades and provider implementation between publication of this final rule and the beginning of Stage 2 in 2014. Any provider starting Stage 2 after 2014 will have more time and therefore most of the constraints are lifted. We acknowledge that not all constraints go away, but we believe that the balance is sufficiently shifted such that the concerns of data validity and program alignment outweigh the few remaining concerns with a full year EHR reporting period for the provider's first year of Stage 2 if it is after 2014. In addition, since ONC's 2014 Edition certification is for all EHR systems, regardless of the stage of meaningful use the provider using that system is in, there are far fewer implementation concerns after 2014. For example, if a provider begins Stage 2 in 2015, that provider would have been required to use CEHRT (that was certified to the 2014 Edition EHR certification criteria) for the previous year (2014) for Stage 1.

Finally, we considered that for the Medicaid EHR incentive program, EPs work exclusively with the states as they must choose between either the Medicare or Medicaid EHR incentive program. We do not know whether shifting from an EHR reporting period of any continuous 90 days to a 3-month quarter will provide any alignment benefits for Medicaid EPs, and it could introduce system complexity for Medicaid agencies. Therefore, we are maintaining flexibility for states to allow Medicaid EPs to select any continuous 90-day EHR reporting period during 2014 as defined by the state Medicaid program, or, if the state so chooses, any 3-month calendar quarter in 2014. As nearly all hospitals participate in both Medicare and Medicaid, we are using the 3-month quarter EHR reporting period for all hospitals to align both programs.

After consideration of the public comments received, we are modifying our proposal with regard to the EHR reporting periods for EPs, eligible hospitals and CAHs that attest to meaningful use for 2014 for their first year of Stage 2 or their second year of Stage 1. Our final policy is as follows: For 2014, Medicare EPs will attest using an EHR reporting period of January 1, 2014 through March 31, 2014; April 1, 2014 through June 30, 2014; July 1, 2014 through September 30, 2014; or October 1, 2014 through December 31, 2014. For 2014, Medicare and Medicaid eligible hospitals and CAHs will attest using an EHR reporting period of October 1, 2013 through December 31, 2013; January 1, 2014 through March 31, 2014; April 1, 2014 through June 30, 2014; or July 1, 2014 through September 30, 2014. Medicaid EPs will attest using an EHR reporting period of any continuous 90-day period between January 1, 2014 and December 1, 2014 as defined by the state Medicaid program, or, if the state so chooses, any 3-month calendar quarter in 2014.

b. Changes to Stage 1 Criteria for Meaningful Use

We proposed the following changes to the objectives and associated measures for Stage 1:

• Computerized Provider Order Entry (CPOE)—In 2013 (CY for EPs, FY for eligible hospitals/CAHs), we proposed that providers in Stage 1 could use the alternative denominator of the number of medication orders created by the EP or in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period (for further explanation of this alternative denominator, see the discussion of the CPOE objective in the Stage 2 criteria section at II.A.3.d. of this final rule).

A provider seeking to meet Stage 1 in 2013 can use either the denominator defined in the Stage 1 final rule or the alternative denominator to calculate the percentage for the CPOE measure. We also proposed to require the alternative denominator for Stage 1 beginning in 2014.

Comment: Commenters both supported and opposed the new denominator for CPOE. Those supporting the proposed denominator did so for its simplicity and greater accuracy for measuring actual CPOE usage. Those opposing the proposed denominator did so either because they were concerned with the burden associated with counting paper or other orders that are never entered into the EHR or because of the potential higher performance required by the proposed denominator.

Response: We proposed the alternative denominator to alleviate the burden associated with measurement, not to create a higher performance threshold. As we stated in the proposed rule, feedback from many providers indicated that the alternative denominator was more easily measurable. In response to concerns from commenters, we are finalizing the alternative denominator for this measure and specify that providers at any year in Stage 1 may elect to use either the denominator defined in the Stage 1 final rule or the alternative denominator to calculate the percentage for the CPOE measure. In response to comments, we are not requiring that the alternative denominator be used beginning in 2014, which will give providers who may find it difficult to measure the flexibility to continue to use the denominator defined in the Stage 1 final rule.

• Vital Signs—For the objective of record and chart changes in vital signs, the proposed Stage 2 measure would allow an EP to split the exclusion and exclude blood pressure only or height/weight only (for more detail, see the discussion of this objective in the Stage 2 criteria section at II.A.3.d. of the final rule). We proposed an identical change to the Stage 1 exclusion as well, starting in CY 2013. We also proposed changing the age limitations on vital signs for Stage 2 (for more detail, see the discussion of this objective in the Stage 2 criteria section). We proposed an identical change to the age limitations on vital signs for Stage 1, starting in 2013 (CY for EPs, FY for eligible hospitals/CAHs). These changes to the exclusion and age limitations were proposed as an alternative in 2013 to the current Stage 1 requirements but required for Stage 1 beginning in 2014.

Comment: While some commenters suggested that these changes would be confusing, most commenters supported the changes and indicated that they would provide added flexibility for providers who seek to incorporate the recording of this data into their clinical workflow. These commenters also noted that the age change reflects best clinical practices. Some commenters suggested removing BMI and growth charts from the measure since there are no best practices on BMI for patients under 3 years of age and since providers who would not record height and weight would not be able to provide BMI or growth charts.

Response: We appreciate the support for these changes and finalize them as proposed. We also note that BMI and

growth charts are not required to meet this measure but are instead a capability provided by CEHRT. Providers who claim the exclusion for height and weight will not have data for CEHRT to create either BMI or growth charts and this will not affect their ability to meet the measure of this objective.

Comment: Some commenters requested clarification on whether providers who provide ancillary services and do not normally record any of these elements as part of their regular scope of practice can claim the exclusion.

Response: If a provider believes that height and weight and/or blood pressure are relevant to their scope of practice, they must record those data elements and cannot qualify for the exclusion. We believe that most providers who provide ancillary services can meet the measure of this objective by obtaining this information from a referring provider and recording the necessary data in their CEHRT.

Comment: Some providers asked for clarification on whether providers who only occasionally record height and weight and/or blood pressure are still permitted to claim the exclusions for this measure.

Response: We recognize that there are situations in which certain providers may only record height and weight and/or blood pressure for a very limited number of patients (for example, high-risk surgical patients or patients on certain types of medication) but do not normally regard these data as relevant to their scope of practice. When a provider does not believe that height and weight and/or blood pressure are typically relevant to their scope of practice but still records these vital signs only in exceptional circumstances, the provider is permitted to claim the exclusions for this measure.

After consideration of the public comments received, we are finalizing the changes to vital signs as proposed. We are making technical corrections to the regulation text at § 495.6(d)(8) and § 495.6(f)(7) to clarify these are alternatives in 2013 and required beginning in 2014.

• Exchange Key Clinical Information—As noted in the proposed rule, the objective of ''capability to exchange key clinical information'' has been surprisingly difficult for providers to understand, which has made the objective difficult for most providers to achieve. We solicited comment on several options for this objective that we believed would reduce or eliminate the burden associated with this objective or increase the value of the objective. The first option we considered was removal of this objective. The second option was to require that the test be successful. The third option was to eliminate the objective, but require that providers select either the Stage 1 medication reconciliation objective or the Stage 1 summary of care at transitions of care and referrals objective from the menu set. The fourth option was to move from a test to one case of actual electronic transmission of a summary of care document for a real patient either to another provider of care at a transition or referral or to a patient authorized entity. We proposed the first option to remove this objective and measure from the Stage 1 core set beginning in 2013 (CY for EPs, FY for eligible hospitals/CAHs), but we also stated we would evaluate all four options in light of the public comments we received.

Comment: While we received feedback and support from commenters on all of the proposed options, the majority of commenters supported the elimination of this objective for Stage 1. Some commenters instead supported a more exact definition of data exchange for this measure, and other commenters supported additional elements or additional requirements for exchange to be included as part of the measure. Other proposals included implementing a system that would allow case-by-case reporting of data exchange that would allow CMS to measure successes and failures by provider, vendor, and other elements.

Response: We appreciate the many suggestions from commenters on clarifying data exchange and/or adding requirements to the measure. We also appreciate the suggestion of a case-by-case reporting system for data exchange. However, we are concerned that all of these options would not alleviate but actually increase the burden of this measure for providers by requiring them to document and submit substantially greater information than is currently required by attestation. While such a burden may be justified, we do not believe it is in this case because the Stage 2 requirements for actual electronic exchange of summary of care records create sufficient incentive to begin testing in Stage 1 without there being an explicit meaningful use requirement to do so. Because of these concerns and in reaction to the opinion of most commenters, we are finalizing the removal of this objective and measure for Stage 1 beginning in 2013. Although some commenters suggested removing this objective earlier, we do not believe the timing of publication of this final rule would allow us to implement such a change and allow consistent reporting for all providers in 2012. Therefore, this objective and measure will be removed from the Stage 1 criteria beginning in 2013 (CY for EPs, FY for eligible hospitals and CAHs).

• View Online, Download, and Transmit—We proposed for Stage 2 a new method for making patient information available electronically, which would enable patients to view online, download, and transmit their health information and hospital admission information. We discuss in the Stage 2 criteria section at II.A.3.d the ''view online, download, and transmit'' objectives for EPs and hospitals. We noted in the proposed rule that starting in 2014, CEHRT would no longer be certified to the Stage 1 EP and hospital core objectives of providing patients with electronic copies of their health information (§ 495.6(d)(12) and (f)(11)) or the Stage 1 hospital core objective of providing patients with electronic copies of their discharge instructions upon request (§ 495.6(f)(12)), nor would it support the Stage 1 EP menu objective of providing patients with timely electronic access to their health information (§ 495.6(e)(5)). Therefore starting in 2014, for Stage 1, we proposed to replace these objectives with the new ''view online, download and transmit'' objectives.

Comment: There were a number of commenters who asked for clarifications regarding the requirements of these objectives. Other commenters raised concerns regarding the implementation of these objectives in both Stage 1 and Stage 2.

Response: We discuss the clarifications and concerns raised by commenters in our Stage 2 criteria at II.A.3.d regarding these objectives. Please refer to those discussions for additional information.

Comment: Some commenters supported this change while other commenters disagreed with it. Those who disagreed with the proposed change indicated that providers would not be ready to implement online access to health information in Stage 1, and that it was unlikely that providers could convince more than 50 percent of patients to sign up for online access within the Stage 1 reporting period. These commenters suggested eliminating all of the Stage 1 objectives for providing electronic copies of health information or discharge summaries and not replacing these objectives with the ''view, download, and transmit'' objectives.

Response: We disagree that the Stage 1 objectives for providing patients with electronic copies of their health information and discharge instructions should be eliminated without replacing

these objectives with the ''view online, download, and transmit'' objectives. We believe patient access to their health information is an important aspect of patient care and engagement, and we further believe that the capabilities of CEHRT in 2014 and beyond will enable providers to make this information available online in a way that does not impose a significant burden on providers.

We note that only the first measure of the ''view online, download, and transmit'' objectives would be required for Stage 1. This means that providers would only have to make information available online to view online, download, and transmit for more than 50 percent of all unique patients during the EHR reporting period in order to meet the measure. We further clarify that providers are only required to make this information available online to view online, download, and transmit and that patients who do not access the information or would not affect whether or not the provider is able to meet the measure. For Stage 1, providers are not required to meet the second measure of more than 5 percent of patients view online, download, or transmit to a third party their health or hospital admission information. Providers are only required to meet the second measure of the objectives in Stage 2. However, the exclusions for these objectives are available for providers in Stage 1. Therefore, we are finalizing our proposal to replace the existing Stage 1 EP and hospital objectives listed above with the ''view online, download, and transmit'' objectives beginning in 2014 for Stage 1. We are making a technical correction to the regulations text to clarify that the existing Stage 1 objective at § 495.6(f)(11) is being replaced. We clarify in Table 4 the four existing Stage 1 objectives that are being replaced. We are also making a technical correction to the regulation text to remove the existing exclusion for the objective at § 495.6(f)(12)(iii) beginning in 2014 because the objective that this exclusion applies to is being replaced.

• Removing CQM Reporting from Stage 1 Objectives—We proposed a revised definition of a meaningful EHR user at § 495.4 which would incorporate the requirement to submit clinical quality measures, as discussed in section II.A.2 of this final rule. We also proposed to remove the objective to submit clinical quality measures from § 495.6 beginning in 2013 for Stage 1 to conform with this change in the definition of a meaningful EHR user.

Comment: While some commenters indicated that this change would be confusing, most commenters supported this change.

Response: We appreciate the support of commenters and believe that removing the objective will actually alleviate confusion. Therefore, as discussed earlier in II.A.2. of this final rule, we are finalizing as proposed, the revised definition of a meaningful EHR user at § 495.4 to include clinical quality measure submission, as well as the removal of this objective from § 495.6 beginning in 2013.

• Public Health Objectives—For the Stage 1 public health objectives, beginning in 2013, we proposed to add ''except where prohibited'' to the regulation text in order to encourage all EPs, eligible hospitals, and CAHs to submit electronic immunization data, even when not required by state/local law. Therefore, if they are authorized to submit the data, they should do so even if it is not required by either law or practice. There are a few instances where some EPs, eligible hospitals, and CAHs are prohibited from submitting to a state/local immunization registry. For example, in sovereign tribal areas that do not permit transmission to an immunization registry or when the immunization registry only accepts data from certain age groups (for example, adults).

Comment: Some commenters supported this change while others disagreed with it. A number of commenters interpreted the proposed addition of language as a change to either the measure of the objectives or the exclusions that are currently in place.

Response: As noted in the proposed rule, the addition of this language was intended to ensure that providers who are not required by law or practice to submit data would do so and to make it clear that EPs, eligible hospitals, and CAHs that are prohibited from submitting data would not be required to submit such data. Immunizations was used as a descriptive example in the proposed rule, but this change applies to all Stage 1 public health objectives. The exclusions provided for these objectives in Stage 1 are not affected by the addition of this language and remain in place for all providers. Therefore, we are finalizing the addition of this language as proposed.

• Menu Set Exclusions Policy—We proposed to change the policy on menu set exclusions for Stage 1 beginning in 2014. Please see section II.A.3.d. of this final rule for a discussion of the proposal and our final policy.

• Electronic Prescribing

Comment: We received comments pointing out that we proposed a new exclusion for electronic prescribing objective for Stage 2 regarding the availability of pharmacies that can accept electronic prescriptions. These commenters noted that if this exclusion was not also made available for Stage 1 then it would create a strange scenario where an EP might have to electronically prescribe during their 2 years of Stage 1 and then meet an exclusion in Stage 2.

Response: We agree that it makes no sense to apply this exclusion to e-prescribing in Stage 2, but not in Stage 1. We consider it an oversight of our proposed rule that we did not include that exclusion in our proposed changes to the Stage 1 criteria. We are finalizing an exclusion for the e-prescribing objective in Stage 2 for any EP who does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period. We are also finalizing the addition of this exclusion to Stage 1 starting in CY 2013.

TABLE 4—STAGE 1 CHANGES

Stage 1 objective	Final changes	Effective year (CY/FY)
Use CPOE for medication orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.	Change: Addition of an alternative measure More than 30 percent of medication orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.	2013 - Onward (Optional).

TABLE 4—STAGE 1 CHANGES—Continued

Stage 1 objective	Final changes	Effective year (CY/FY)
Generate and transmit permissible prescriptions electronically (eRx).	Change: Addition of an additional exclusion Any EP who: does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period.	2013—Onward (Required).
Record and chart changes in vital signs.	Change: Addition of alternative age limitations More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height and weight (for all ages) recorded as structured data.	2013 Only (Optional).
Record and chart changes in vital signs.	Change: Addition of alternative exclusions ..... Any EP who (*1*) Sees no patients 3 years or older is excluded from recording blood pressure; (*2*) Believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them; (*3*) Believes that height and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or (*4*) Believes that blood pressure is relevant to their scope of practice, but height and weight are not, is excluded from recording height and weight.	2013 Only (Optional).
Record and chart changes in vital signs.	Change: Age limitations on height, weight and blood pressure ..... More than 50 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height and weight (for all ages) recorded as structured data.	2014—Onward (Required).
Record and chart changes in vital signs.	Change: Changing the age and splitting the EP exclusion ..... Any EP who (*1*) Sees no patients 3 years or older is excluded from recording blood pressure; (*2*) Believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them; (*3*) Believes that height and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or (*4*) Believes that blood pressure is relevant to their scope of practice, but height and weight are not, is excluded from recording height and weight.	2014—Onward (Required).
Capability to exchange key clinical information (for example, problem list, medication list, medication allergies, and diagnostic test results), among providers of care and patient authorized entities electronically.	Change: Objective is no longer required	2013—Onward (Required).
Report ambulatory (hospital) clinical quality measures to CMS or the states.	Change: Objective is incorporated directly into the definition of a meaningful EHR user and eliminated as an objective under § 495.6.	2013—Onward (Required).
EP and Hospital Objectives: Provide patients with an electronic copy of their health information (including diagnostics test results, problem list, medication lists, medication allergies, discharge summary, procedures) upon request.	Change: Replace these four objectives with the Stage 2 objective and one of the two Stage 2 measures.. EP Objective: Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.. EP Measure: More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information.	2014—Onward (Required).

TABLE 4—STAGE 1 CHANGES—Continued

Stage 1 objective	Final changes	Effective year (CY/FY)
Hospital Objective: Provide patients with an electronic copy of their discharge instructions at time of discharge, upon request.	Hospital Objective: Provide patients the ability to view online, download, and transmit information about a hospital admission.	
EP Objective: Provide patients with timely electronic access to their health information (including lab results, problem list, medicatiion lists, and allergies) within 4 business days of the information being available to the EP..	Hospital Measure: More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge.	
Public Health Objectives:	Change: Addition of ''except where prohibited'' to the objective regulation text for the public health objectives under § 495.6.	2013—Onward (Required).
Stage 1 Policy Changes		
Meeting an exclusion for a menu set objective counts towards the number of menu set objectives that must be satisfied to meet meaningful use.	Meeting an exclusion for a menu set objective does not count towards the number of menu set objectives that must be satisfied to meet meaningful use..	2014—Onward (Required).

c. State Flexibility for Stage 2 of Meaningful Use

We proposed to offer states flexibility under the Medicaid incentive program with the public health measures in Stage 2, similar to that of Stage 1, subject to the same conditions and standards as the Stage 1 flexibility policy. This applies to the public health measures as well as the measure to generate lists of specific conditions to use for quality improvement, reduction of disparities, research or outreach. We clarify that our proposal included the existing public health measures from Stage 1 as well as the new public health measures proposed for Stage 2.

In addition, we stated that whether a state moved an objective to the core or left it in the menu, states may also specify the means of transmission of the data or otherwise change the public health measure, as long as it does not require EHR functionality above and beyond that which is included in the 2014 ONC EHR certification criteria.

We solicited comments on extending state flexibility as described for Stage 2 of meaningful use and whether this remains a useful tool for state Medicaid agencies.

Comment: Commenters requested clarification of the requirement that states cannot require EHR functionality above and beyond that which is included in the 2014 ONC EHR certification criteria. These commenters point out that the Stage 2 public health measures require capabilities beyond that which is included in the 2014 ONC EHR certification criteria already.

Response: We assume commenters are referring to transmission methods which are not included in 2014 Edition EHR certification criteria adopted by ONC for public health objectives (immunizations, electronically reportable lab results, syndromic surveillance, cancer registries and specialized registries). This limitation applies only to those capabilities and standards included in 2014 ONC EHR certification criteria for a given public health objective. For example, a state could not require a different standard than the one included in 2014 ONC EHR certification criteria. In cases where the 2014 ONC EHR certification criteria are silent, such as the means of transmission for a given public health objective, the state may propose changes to public health measures.

Comment: Several commenters supported extending state flexibility with meaningful use for Stage 2, but requested that CMS provide a clearer definition of state flexibility. Commenters suggested that it would be helpful to EPs and eligible hospitals if states follow a common timeline for establishing state-specific requirements.

Response: We appreciate these comments and would like to clarify that the state flexibility for Stage 2 remains defined the same way as it is defined in Stage 1 at § 495.316 (d)(2) and § 495.322 (f)(2). Given that states are launching their programs at different times and are therefore at different stages in the program lifecycle and process, at this time we do not support the development of a common timeline for establishing state-specific requirements. The parameters remain the same as for Stage 1 and providers are subject to the requirements found in § 495.332. CMS approval of states' requests will include a review of the outlined elements.

After consideration of the public comments received, we are finalizing these provisions as proposed.

d. Stage 2 Criteria for Meaningful Use (Core Set and Menu Set)

We proposed to continue the Stage 1 concept of a core set of objectives and a menu set of objectives for Stage 2. In the Stage 1 final rule (75 FR 44322), we indicated that for Stage 2, we expected to include the Stage 1 menu set objectives in the core set. We proposed to follow that approach for our Stage 2 core set with two exceptions. We proposed to keep the objective of ''capability to submit electronic syndromic surveillance data to public health agencies'' in the menu set for EPs. Our experience with Stage 1 is that very few public health agencies have the ability to accept non-emergency or non urgent care ambulatory syndromic surveillance data electronically and those that do are less likely to support EPs than hospitals; therefore we do not believe that current infrastructure supports moving this objective to the core set for EPs. We also proposed to keep the objective of ''record advance directives'' in the menu set for eligible hospitals and CAHs. As we stated in our Stage 1 final rule (75 FR 44345), we have continuing concerns that there are potential conflicts between storing advance directives and existing state laws.

We proposed new objectives for Stage 2, some of which would be part of the

Stage 2 core set and others would make up the Stage 2 menu set, as discussed below with each objective. We proposed to eliminate certain Stage 1 objectives for Stage 2, such as the objective for testing the capability to exchange key clinical information. We proposed to combine some of the Stage 1 objectives for Stage 2. For example, the objectives of maintaining an up-to-date problem list, active medication list, and active medication allergy list would not be separate objectives for Stage 2. Instead, we proposed to combine these objectives with the objective of providing a summary of care record for each transition of care or referral by including them as required fields in the summary of care.

We proposed a total of 17 core objectives and 5 menu objectives for EPs. We proposed that an EP must meet the criteria or an exclusion for all of the core objectives and the criteria for 3 of the 5 menu objectives. This is a change from our current Stage 1 policy where an EP could reduce the number of menu set objectives that the EP would otherwise need to meet by the number of menu set objectives that the EP could exclude. We noted the feedback we received on Stage 1 from providers and health care associations leads us to believe that most EPs had difficulty understanding the concept of deferral of a menu objective in Stage 1. Therefore, we proposed this change for Stage 2, as well as for Stage 1 beginning in 2014, to make the selection of menu objectives easier for EPs. We also proposed this change because we are concerned that under the current Stage 1 requirements some EPs could select and exclude menu objectives when there are other menu objectives they can legitimately meet, thereby making it easier for them to demonstrate meaningful use than EPs who attempt to legitimately meet the full complement of menu objectives. Although we provided the ability to do this in the selection of Stage 1 menu objectives through 2013, we stated that EPs participating in Stage 1 and Stage 2 starting in 2014 should focus solely on those objectives they can meet rather than those for which they have an exclusion. In addition, we noted the exclusions for the Stage 2 menu objectives that we believe would accommodate EPs who are unable to meet certain objectives because of scope of practice. However, just as we signaled in our Stage 1 regulation, we stated our intent to propose in our next rulemaking that every objective in the menu set for Stage 2 (as described later in this section) be included in Stage 3 as part of the core set.

We explained that in the case where an EP meets the criteria for the exclusions for 3 or more of the Stage 2 menu objectives, the EP would have more exclusions than the allowed deferrals. EPs in this situation would attest to an exclusion for 1 or more menu objectives in his or her attestation to meaningful use. In doing so, the EP would be attesting that he or she also meets the exclusion criteria for all of the menu objectives that he or she did not choose. We stated that the same policy would also apply for the Stage 1 menu objectives for EPs beginning in 2014.

We proposed a total of 16 core objectives and 4 menu objectives for eligible hospitals and CAHs for Stage 2. We proposed that an eligible hospital or CAH must meet the criteria or an exclusion for all of the core objectives and the criteria for 2 of the 4 menu objectives. We proposed that the policy for exclusions for EPs discussed in the preceding paragraph would also apply to eligible hospitals and CAHs for Stage 1 beginning in 2014 and for Stage 2.

We received many comments on the appropriateness of individual objectives placement in the core or menu set. We discuss these comments below for each individual objective.

Comment: Commenters expressed concern over the small number of objectives in the menu set. They were concerned that the small number of objectives limited the usefulness of the menu set to providers.

Response: Stage 2 does contain a more specialized and smaller menu set than Stage 1. We see this as a natural result of moving up the staged path towards improved outcomes and adding fewer new objectives. We also see specialization as necessary for meaningful use to be applicable to all EPs. Due to comments received we are adding two objectives for hospitals and one for EPs which will be in the menu, as further explained later in this section.

After consideration of the public comments received, we finalize the concept of a core and menu set for Stage 2.

We finalize a total of 17 core objectives and 6 menu objectives for EPs for Stage 2. We finalize that an EP must meet the criteria or an exclusion for all of the core objectives and the criteria for 3 of the 6 menu objectives unless an exclusion can be claimed for more than 3 of the menu objectives in which case the criteria for the remaining non-excluded objectives must be met.

We finalize a total of 16 core objectives and 6 menu objectives for eligible hospitals and CAHs for Stage 2. We finalize that an eligible hospital or CAH must meet the criteria or an exclusion for all of the core objectives and the criteria for 3 of the 6 menu objectives.

We also finalize our proposal to change the menu set exclusions policy for Stage 1. Beginning in 2014, qualifying for an exclusion from a menu set objective will no longer reduce the number of menu set objectives that an EP or hospital must otherwise satisfy to demonstrate meaningful use for Stage 1. There is an exception for EPs who meet the criteria to exclude five or more of the menu set objectives, in which case the EP must meet the criteria for all of the remaining non-excluded menu set objectives. This exception would not be applicable to hospitals due to the number of hospital menu set objectives that include exclusions.

(1) Discussion of Whether Certain EPs, Eligible Hospitals or CAHs Can Meet All Stage 2 Meaningful Use Objectives Given Established Scopes of Practice

We noted in the proposed rule that we do not believe that any of the proposed new objectives for Stage 2 make it impossible for any EP, eligible hospital or CAH to meet meaningful use. Where scope of practice may prevent an EP, eligible hospital or CAH from meeting the measure associated with an objective, we discussed the barriers and included exclusions in our descriptions of the individual objectives. We proposed to include new exclusion criteria when necessary for new objectives, continue the Stage 1 exclusions for Stage 2, and continue the option for EPs and hospitals to defer some of the objectives in the menu set unless they meet the exclusion criteria for more objectives than they can defer as explained previously.

We recognized in the proposed rule that at the time of publication, our data (derived internally from attestations) only reflected the meaningful use attestations from Medicare providers. There have been no significant changes in the data derived from meaningful use attestations since the publication of the proposed rule.

We did not receive any comments on this provision.

(2) EPs Practicing in Multiple Practices/Locations

We proposed for Stage 2 to continue our policy that to be a meaningful EHR user, an EP must have 50 percent or more of his or her outpatient encounters during the EHR reporting period at a practice/location or practices/locations equipped with CEHRT. An EP who does not conduct at least 50 percent of their patient encounters in any one practice/location would have to meet the 50

percent threshold through a combination of practices/locations equipped with CEHRT. We gave the following in the proposed rule example: if the EP practices at a federally qualified health center (FQHC) and within his or her individual practice at 2 different locations, we would include in our review all 3 of these locations, and CEHRT would have to be available at one location or a combination of locations where the EP has 50 percent or more of his or her patient encounters. If CEHRT is only available at one location, then only encounters at this location would be included in meaningful use assuming this one location represents 50 percent or more of the EP's patient encounters. If CEHRT is available at multiple locations that collectively represent 50 percent or more of the EP's patient encounters, then all encounters from those locations would be included in meaningful use.

In the proposed rule we stated that we have received many inquiries on this requirement since the publication of the Stage 1 final rule. We define patient encounter as any encounter where a medical treatment is provided and/or evaluation and management services are provided. This includes both individually billed events and events that are globally billed, but are separate encounters under our definition. We define a practice/location as equipped with CEHRT if the record of the patient encounter that occurs at that practice/location is created and maintained in CEHRT. This can be accomplished in three ways: CEHRT could be permanently installed at the practice/location, the EP could bring CEHRT to the practice/location on a portable computing device, or the EP could access CEHRT remotely using computing devices at the practice/location. Although it is currently allowed under Stage 1 for an EP to create a record of the encounter without using CEHRT at the practice/location and then later input that information into CEHRT that exists at a different practice/location, we do not believe this process takes advantage of the value CEHRT offers. We proposed not to allow this practice beginning in 2013. We have also received inquiries whether the practice locations have to be in the same state, to which we clarify that they do not. Finally, we received inquiries regarding the interaction with hospital-based EP determination. The determination of whether an EP is hospital-based or not occurs prior to the application of this policy, so only nonhospital-based eligible professionals are included. Furthermore, this policy, like all meaningful use policies for EPs, only applies to outpatient settings (all settings except the inpatient and emergency department of a hospital).

Comment: Some commenters suggested that for EPs practicing in multiple locations that meaningful use attestations should be limited to just reporting on meaningful use for the most prevalent location due to the difficulty in aggregating data across locations.

Response: We continue to believe that for the core measures, aggregating data is not overly burdensome. We allow the numerators and denominators calculated by CEHRT to be summed across an EP's various practice locations.

Comment: We received request for clarification on what to do when an EP is practicing in multiple locations that select different menu objectives to pursue, and the EP does not control this selection.

Response: An EP who does not have the same menu objectives implemented across each of their practice locations equipped with CEHRT would attest to the three menu objectives that represent the greatest number of their patient encounters. For example, if six menu objectives are implemented between two locations, an EP would attest to the three menu objectives implemented at the location where they have the greatest number of encounters during the EHR reporting period. For measures that utilize a percentage threshold, they can limit the denominator to the location or locations that pursued that menu objective.

After consideration of the public comments received, we are finalizing the proposed provisions with the modifications previously discussed.

(3) Discussion of the Reporting Requirements of the Measures Associated With the Stage 2 Meaningful Use Objectives

In our experience with Stage 1, we found the distinction between limiting the denominators of certain measures to only those patients whose records are maintained using CEHRT, but including all patients in the denominators of other measures, to be complicated for providers to implement. We proposed to remove this distinction for Stage 2 and instead include all patients in the denominators of all of the measures associated with the meaningful use objectives for Stage 2. We believe that by the time an EP, eligible hospital, or CAH has reached Stage 2 of meaningful use all or nearly all of their patient population should be included in their CEHRT, making this distinction no longer relevant.

Comment: We received comments that maintain that this distinction is still necessary for Stage 2 because there are situations where significant patient records may still be maintained outside of CEHRT. Examples provided by commenters include worker's compensation or other special contracts for certain patients, specialized departments or units in a hospital for which CEHRT is not tailored and patient requests to keep their records on paper.

Response: We continue to believe that nearly all patient records will be stored in CEHRT by the time a provider reaches Stage 2. However, we acknowledge that if this assertion is correct then there is no practical consequence of maintaining the distinction, while if it is not, removing the distinction could have adverse impacts on providers.

After consideration of the comments, we are not finalizing our proposed change. Instead, we maintain the distinction between measures that include only those patients whose records are maintained using CEHRT and measures that include all patients. Providers may limit the denominator to those patients whose records are maintained using CEHRT for measures with a denominator other than unique patients seen by the EP during the EHR reporting period or unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department during the EHR reporting period.

Comment: Some commenters suggested that the denominators should be limited to either just Medicare-covered patients for those participating in the Medicare EHR Incentive Program or just Medicaid-covered patients for those participating in the Medicaid EHR Incentive Program. Commenters presented two arguments in favor of this suggestion. First, that requiring a provider to include all patients was more burdensome than including just Medicare-covered or Medicaid-covered patients and that this burden was not offset by the incentive payments that are based (for Medicare only) on charges submitted to Medicare. Second, that if identifiable patient data was included in Medicare or Medicaid meaningful use reporting for patient not covered by Medicare or Medicaid this would raise serious privacy concerns and possibly require patient consent. Other commenters were supportive of current denominators that does not account for payers.

Response: We discussed the burden differences between all patients versus patients differentiated by payer in our Stage 1 final rule (75 FR44332). We continue to believe that it is highly unlikely that providers will use different record keeping systems based on payer. Where there are differences in patient populations such as age we account for them directly in the measure not indirectly with payer as a generalized proxy. The burden of breaking out the patients by payer for purposes of meaningful use measurement would have only increased from the publication of the Stage 1 final rule as measurement tools have been designed and implemented to measure patients regardless of payer. If at a future date, the demonstration of meaningful use includes the submission of identifiable patient data we will certainly address the privacy implications of that requirement. However, the Stage 1 objectives and measures and Stage 2 objectives and measures included in this final rule do not require the submission of identifiable patient information. We are not making any changes to this policy in this final rule.

We proposed new objectives that could increase reporting burden. To minimize the burden, we proposed to create a uniform set of denominators that would be used for all of the Stage 2 meaningful use objectives, as discussed later.

Many of our meaningful use objectives use percentage-based measures if appropriate. To provide a check on the burden of reporting of meaningful use, we proposed for Stage 2 to use 1 of 4 denominators for each of the measures associated with the meaningful use objectives. We focused on denominators because the action that moves something from the denominator to the numerator usually requires the use of CEHRT by the provider. These actions are easily tracked by the technology.

The four proposed denominators for EPs are—

- Unique patients seen by the EP during the EHR reporting period (stratified by age or previous office visit);
- Number of orders (medication, labs, radiology);
- Office visits, and
- Transitions of care/referrals.

Comment: We received many comments supporting our efforts to minimize the variety of denominators. Some commenters argued that any variation (such as by age or orders of different types) should be considered separate denominators.

Response: We appreciate the support for our proposal to minimize the variety of denominators. Our base of four denominators are only modified by information that must be entered into CEHRT in order to meet meaningful use; therefore, we believe that such modifications represent a small burden and are in keeping with our overall goal in minimizing the variety of denominators.

In the proposed rule, we stated that the term ''unique patient'' means that if a patient is seen or admitted more than once during the EHR reporting period, the patient only counts once in the denominator. Patients seen or admitted only once during the EHR reporting period will count once in the denominator. A patient is seen by the EP when the EP has an actual physical encounter with the patient in which they render any service to the patient. A patient seen through telemedicine will also still count as a patient ''seen by the EP.'' In cases where the EP and the patient do not have an actual physical or telemedicine encounter, but the EP renders a minimal consultative service for the patient (like reading an EKG), the EP may choose whether to include the patient in the denominator as ''seen by the EP'' provided the choice is consistent for the entire EHR reporting period and for all relevant meaningful use measures. For example, a cardiologist may choose to exclude patients for whom they provide a one-time reading of an EKG sent to them from another provider, but include more involved consultative services as long as the policy is consistent for the entire EHR reporting period and for all meaningful use measures that include patients ''seen by the EP.'' EPs who never have a physical or telemedicine interaction with patients must adopt a policy that classifies at least some of the services they render for patients as ''seen by the EP,'' and this policy must be consistent for the entire EHR reporting period and across meaningful use measures that involve patients ''seen by the EP''—otherwise, these EPs will not be able to satisfy meaningful use, as they will have denominators of zero for some measures. In cases where the patient is seen by a member of the EP's clinical staff the EP can include or not include those patients in their denominator at their discretion as long as the decision applies universally to all patients for the entire EHR reporting period and the EP is consistent across meaningful use measures. In cases where a member of the EP's clinical staff is eligible for the Medicaid EHR incentive in their own right (for example, nurse practitioners (NPs) and certain physician assistants (PA)), patients seen by NPs or PAs under the EP's supervision can be counted by both the NP or PA and the supervising EP as long as the policy is consistent for the entire EHR reporting period.

Comment: While generally supporting the concept of a unique patient as a good tool to address the fact that not all meaningful use objectives need be addressed at every patient encounter or rendering of medical service, some commenters expressed concern about the ability to identify unique patients across CEHRTs in situations where an EP practices at multiple locations or in situations where an EP might switch CEHRT during an EHR reporting period.

Response: We agree that determining unique patients across CEHRTs is difficult. When aggregating performance on meaningful use measures across multiple practice locations using different CEHRTs we do not require that it be determined that a patient seen at one location was not also seen at another location. While this could result in the same patient appearing more than once in the denominator of unique patients seen, we believe that the burden of seeking out these patients is greater than any gain in measurement accuracy. Furthermore, it is not possible for a provider to increase only the numerator with this policy as any increase in the numerator would also increase the denominator. Accordingly, we are adopting a final policy that will give EPs who practice at multiple locations or switch CEHRT during the EHR reporting period some flexibility as to the method for counting unique patients in the denominators. We leave it up to the EP to decide for the EHR reporting period whether to count a unique patient across all locations equipped with different CEHRT (for example, 1 patient seen at 3 locations with different CEHRT counts once) or at each location equipped with CEHRT (for example, 1 patient seen at 3 locations with different CEHRT counts thrice). In cases where a provider switches CEHRT products at a single location during the EHR reporting period, they also have the flexibility to count a patient as unique on each side of the switch and not across it (for example, 1 patient seen before the switch and after the switch could be counted once or twice). EPs in these scenarios must choose one of these methods for counting unique patients and apply it consistently throughout the entire EHR reporting period.

With the flexibility for EPs practicing in multiple locations using different CEHRT or switching CEHRT during the

EHR reporting period, we otherwise finalize our description of ''unique patient'' as proposed.

We proposed that an office visit is defined as any billable visit that includes: (1) Concurrent care or transfer of care visits; (2) consultant visits; or (3) prolonged physician service without direct, face-to-face patient contact (for example, telehealth). A consultant visit occurs when a provider is asked to render an expert opinion/service for a specific condition or problem by a referring provider. The visit does not have to be individually billable in instances where multiple visits occur under one global fee.

Comment: We received comments requesting that we establish a list of billing codes that constitute an office visit for purposes of clarity.

Response: We continue to believe that the use of a list of billing codes would inappropriately limit the discretion of EPs that we have built into this measure. We finalize as proposed our description of an office visit and emphasize that there is room for EP discretion in this definition and that the most important consideration in utilizing that discretion is that the policy apply for the entire EHR reporting period and across all patients.

We proposed to describe transitions of care as the movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another. Currently, the meaningful use measures that use transitions of care require there to be a receiving provider of care to accept the information. Therefore, a transition home without any expectation of follow-up care related to the care given in the prior setting by another provider is not a transition of care for purpose of Stage 2 meaningful use measures as there is no provider recipient. A transition within one setting of care does not qualify as a transition of care. Referrals are cases where one provider refers a patient to another, but the referring provider maintains their care of the patient as well. Please note that a ''referral'' as defined here and elsewhere in this final rule is only intended to apply to the EHR Incentive Programs and is not applicable to other Federal regulations.

Comment: We have received many comments that determining when a transition of care occurs is very difficult under our current Stage 1 rule, particularly when the provider is on the receiving end of the transition of care. Commenters suggest that the only reliable way to know if a patient saw another provider is to ask the patient at each encounter and even then this is not guaranteed. Several suggestions were presented to make the definition more precise on both the receiving and transitioning side. They were as follows:—

- Discharges for eligible hospitals/CAHs and referrals to other providers who do not share the same CEHRT as the EP are very clearly identified and should be the focus of the numerator/denominator.
- A transition within one setting of care does not qualify as a transition of care. Referral is defined as care ''where one provider refers a patient to another, but the referring provider maintains their care of the patient as well.''
- A patient is referred to another provider (for EPs) or a patient is discharged (for eligible hospitals).
- Sharing data with health plans.

Response: In reviewing the comments, we agree that a refinement of our transitions of care definition is needed. We also agree with the suggestions to point to specific events that identify a transition of care has occurred without relying entirely on asking the patient. Therefore, we revise our description of transitions of care for the purpose of defining the denominator. For an EP who is on the receiving end of a transition of care or referral, (currently used for the medication reconciliation objective and measure), the denominator includes first encounters with a new patient and encounters with existing patients where a summary of care record (of any type) is provided to the receiving provider. The summary of care record can be provided either by the patient or by the referring/transiting provider or institution. We believe that both of these situations would create information in the CEHRT that can be automatically recorded. For an EP who is initiating a patient transfer to another setting and/or referring a patient to another provider, (currently used for providing summary of care documents at transitions of care), the initiating/referring EP would count the transitions and/or referrals that were ordered by the EP in the measure denominator. If another provider also sees the same patient, only the EP who orders the transition/referral would need to account for this transition for the purpose of this measure. EPs are not responsible for including patient-initiated transitions and referrals that were not ordered by the EP. For example, if the EP creates an order for admission to a nursing home, this transition of care would be counted in the EP's measure denominator. If one of the EP's patients is admitted to a nursing home by another provider, this transition would only have to be counted by the EP who creates the order and not necessarily by other EPs who care for the patient. We want to emphasize that these transitions of care/referral descriptions have been developed for purposes of reducing the provider measurement burden for the EHR Incentive Program and do not necessarily apply to other programs or regulations. We also clarify that these descriptions are minimum requirements. An EP can include in the denominator transitions of care and referrals that fit the broader descriptions of these terms, but are not one of the specific events described previously.

The four proposed denominators for eligible hospitals and CAHs are—

- Unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department during the EHR reporting period (stratified by age);
- Number of orders (medication, labs, radiology);
- Inpatient bed days; and
- Transitions of care.

We noted in the proposed rule that our explanation of ''unique patients'' and ''transitions of care'' for EPs would also apply for eligible hospitals and CAHs.

Comment: Commenters suggested a problem with unique patients could arise if a hospital switched CEHRT during the EHR reporting period.

Response: Our final policy on EPs who switch CEHRT during the EHR reporting period counting unique patients in the denominator would also apply for hospitals in the same situation.

Comment: We have received many comments that determining when a transition of care occurs is very difficult under our Stage 1 regulations, particularly when the provider is on the receiving end of the transition of care. Commenters suggest that the only reliable way to know if a patient saw another provider is to ask the patient at each encounter and even then this is not guaranteed. Several suggestions were presented to make the definition more precise on both the receiving and transitioning side, which we summarized previously in the discussion of the proposed denominators for EPs.

Response: For the same reasons as discussed for EPs, we agree that pointing to specific occurrences is needed to accurately measure this denominator. For transitions of care when the hospital is on the receiving end, (currently used for the medication reconciliation objective and measure), we include all admissions to the inpatient and emergency departments.

For transitions of care when the hospital is transitioning the patient, (currently used for providing summary of care documents at transitions of care), we include all discharges from the inpatient department and after admissions to the emergency department when follow-up care is ordered by an authorized provider of the hospital. As with EPs, these are the minimum events that must be included in the denominator for the transitions of care measure. Hospitals can include additional transitions of care that match the full description of transitions of care, but are not one of these specific events.

We proposed that admissions to the eligible hospital or CAH can be calculated using one of two methods currently available under Stage 1 of meaningful use. The observation services method includes all patients admitted to the inpatient department (POS 21) either directly or through the emergency department and patients who initially present to the emergency department (POS 23) and receive observation services. Details on observation services can be found in the Medicare Benefit Policy Manual, Chapter 6, Section 20.6. Patients who receive observation services under both the outpatient department (POS 22) and emergency department (POS 23) should be included in the denominator under this method. The all emergency department method includes all patients admitted to the inpatient department (POS 21) either directly or through the emergency department and all patients receiving services in the emergency department (POS 23).

Comment: Commenters expressed near universal support for the continuance of the two options in defining an admission to the emergency department.

Response: We continue to believe that not all information required by meaningful use may be relevant to all encounters in the emergency department and that this decision is best left to the hospital; therefore, we are finalizing this as proposed.

We proposed that inpatient bed days are the admission day and each of the following full 24-hour periods during which the patient is in the inpatient department (POS 21) of the hospital. For example, a patient admitted to the inpatient department at noon on June 5th and discharged at 2 p.m. on June 7th will be admitted for 2-patient days: the admission day (June 5th) and the 24 hour period from 12 a.m. on June 6th to 11:59 p.m. on June 6th.

We did not receive comments on this proposal. This denominator is not used by the proposed meaningful use objectives and measures nor the finalized objectives and measures.

As discussed later in this section, we are including the menu objective for hospitals of ''Provide structured electronic lab results to ambulatory providers''. The measure associated with the objective uses a denominator that was not included in our proposal. The denominator is the number of electronic lab orders received by the hospital from ambulatory providers. For this objective, we use the same description of ''laboratory services'' as for our Stage 2 CPOE objective: any service provided by a laboratory that could not be provided by a nonlaboratory. We also use the definition of ''laboratory'' at § 493.2 as for the Stage 2 CPOE objective. Any order for a laboratory service will be considered a lab order. For the order to be considered received electronically, it must be received by the hospital utilizing an electronic transmission method and not through methods such as physical electronic media, electronic fax, paper document or telephone call.

After consideration of public comments, we are finalizing the following denominators for EPs:

- Unique patients seen by the EP during the EHR reporting period (stratified by age or previous office visit);
- Number of orders (medication, labs, radiology);
- Office visits; and
- Transitions of care/referrals including at a minimum one of the following:

++ When the EP is the recipient of the transition or referral, first encounters with a new patient and encounters with existing patients where a summary of care record (of any type) is provided to the receiving EP;

++ When the EP is the initiator of the transition or referral, transitions and referrals ordered by the EP.

We are finalizing the following denominators for eligible hospitals and CAHs:

- Unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department during the EHR reporting period (stratified by age);
- Number of orders (medication, labs, radiology);
- Transitions of care including at a minimum one of the following:

++ When the hospital is the recipient of the transition or referral, all admissions to the inpatient and emergency departments,

++ When the hospital is the initiator of the transition or referral, all discharges from the inpatient department and after admissions to the emergency department when follow-up care is ordered by authorized providers of the hospital; and

- Electronic lab orders received by the hospital from ambulatory providers.

(4) Discussion of the Relationship of Meaningful Use to CEHRT

We proposed to continue our policy of linking each meaningful use objective to certification criteria for CEHRT. As with Stage 1, EPs, eligible hospitals, and CAHs must use the capabilities and standards that are certified to meet the objectives and associated measures for Stage 2 of meaningful use. In meeting any objective of meaningful use, an EP, eligible hospital or CAH must use the capabilities and standards that are included in certification. We noted that in some instances, meaningful use objectives and measures require use that is not directly enabled by certified capabilities and/or standards. In these cases, the EP, eligible hospital and CAH is responsible for meeting the objectives and measures of meaningful use, but the way they do so is not constrained by the capabilities and standards of CEHRT. In the proposed rule we gave the following example: in e-Rx and public health reporting, CEHRT applies standards to the message being sent and enables certain capabilities for transmission in 2014; however, to actually engage in e-Rx or public health reporting many steps must be taken outside of these standards and capabilities such as contacting both parties and troubleshooting issues that may arise through the normal course of business.

Comment: We received many comments that expressed confusion of when the capabilities and standards included in certification must be used and when they do not.

Response: Nearly all of these comments were objective-specific, so we address them at the referenced objective. With each measure we include a universal statement on the applicability of the specific standards and capabilities included in the 2014 edition of certification criteria for EHR technologies and, if applicable, specific allowances for that measure.

After consideration of the public comments received, we are finalizing these provisions as proposed.

(5) Discussion of the Relationship Between a Stage 2 Meaningful Use Objective and Its Associated Measure

We proposed to continue our Stage 1 policy that regardless of any actual or perceived gaps between the measure of an objective and full compliance with the objective (such as a measure threshold of less than 100 percent or a

measure designed to account for circumstances where 100 percent compliance in not the intention of the objective), meeting the criteria of the measure means that the provider has met the objective for Stage 2.

We did not receive any comments and we are finalizing these provisions as proposed.

(6) Objectives and Their Associated Measures

(a) Objectives and Measures Carried Over (Modified or Unmodified) From Stage 1 Core Set to Stage 2 Core Set

Proposed Objective: Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines to create the first record of the order.

In the proposed rule, we outlined the following benefits of CPOE. CPOE improves quality and safety by allowing clinical decision support at the point of the order and therefore influences the initial order decision. CPOE improves safety and efficiency by automating aspects of the ordering process to reduce the possibility of communication and other errors. Consistent with the recommendations of the HIT Policy Committee, we proposed to expand the orders included in the objective to medication (which was included in Stage 1), laboratory, and radiology. We believe that the expansion to laboratory and radiology furthers the goals of the CPOE objective, that such orders are commonly included in CPOE roll outs and that inclusion of the entry of these orders using CPOE is a logical step in the progression of meaningful use. We note that this does not require the electronic transmission of the order.

We proposed to continue to define CPOE as the provider's use of computer assistance to directly enter medical orders (for example, medications, consultations with other providers, laboratory services, imaging studies, and other auxiliary services) from a computer or mobile device. The order is then documented or captured in a digital, structured, and computable format for use in improving safety and efficiency of the ordering process. We further proposed that the CPOE function of CEHRT must be used by the ordering provider or licensed healthcare professionals under his or her direction to create the first record of that order, or it would not count as CPOE. As this proposed objective limits the use of CPOE to the creation of the first record of the order (a more restrictive standard than in Stage 1), we invited public comment on whether the stipulation that the CPOE function be used only by licensed healthcare professionals remains necessary or if CPOE can be expanded to include non-licensed healthcare professionals such as scribes.

Comment: Commenters focused primarily on CPOE's value as the trigger for clinical decision support interventions. It was suggested the term be revised from computerized provider order entry to computerized order evaluation. This focus led to the suggestion by several commenters that as long as the ordering providers ''signs'' or otherwise authorizes the order before it is carried out this should count for CPOE. These commenters maintain that meaningful use should not dictate any of the processes that lead up to this authorization including who enters the order into CEHRT nor what types of record of the order may exist prior to entry into CEHRT.

Response: We agree that CPOE as the trigger for CDS interventions is the primary value creating function of CPOE. However, we disagree that it is the only one. We believe automating aspects of and/or eliminating steps in the ordering process prior to final authorization of the order does reduce communication and other errors. Furthermore, it is our understanding from both commenters and our own experiences with CEHRT that many EHRs use the entry of the order as the trigger for CDS interventions and either display them again at authorization or do not display them at all at authorization. For these reasons, we continue to focus the definition and measurement of CPOE on when and by whom the order is entered into CEHRT and not on when it is authorized by the ordering provider in CEHRT.

Comment: Commenters stated that the authentication of verbal orders is already covered by the conditions of participation for hospitals at 42 CFR482.24(c)(1)(iii) which states that ''[a]ll verbal orders must be authenticated based upon Federal and state law. If there is no state law that designates a specific timeframe for the authentication of verbal orders, verbal orders must be authenticated within 48 hours.'' Meaningful use should adopt this same standard.

Response: We are not adopting this standard for two reasons. First, as this is in an incentive program, we do not believe it is logical to base a requirement for meaningful use solely on a condition of participation. Hospitals already must comply with the conditions of participation, so we believe as an incentive program meaningful use should be incentivizing behavior beyond the conditions of participation. Second, as discussed later, we are not limiting the communication of orders prior to CPOE to verbal orders so there is not a direct corollary between this condition of participation and our description of CPOE. Section 482.23(c)(2) also speaks to verbal orders. First, it states, ''If verbal orders are used, they are to be used infrequently. Second, it states, ''When verbal orders are used, they must only be accepted by persons who are authorized to do so by hospital policy and procedures consistent with Federal and state law.'' We discuss who may enter the order later in comment and response, but reiterate our position that meaningful use should incentivize behavior that benefits patients beyond that required by the conditions of participation.

Comment: Commenters objected to our proposal to change our policy regarding CPOE from ''the CPOE function should be used the first time the order becomes part of the patient's medical record and before any action can be taken on the order'' to ''the order created using the EHR must be the first record of that order or it would not count as CPOE''. The commenters stressed that if they used a process that created a record of the order that was not part of the patient's medical record, then the proposed policy requiring this record not be retained is not advisable. The commenters asserted that even if it was not part of the patient's medical record the initial record of the order could be used for quality control purposes.

Response: Our proposed policy change was intended as an evolution from the Stage 1 requirements for CPOE. However, after reviewing the comments received, we agree that requiring an electronic or written order that is not created using the CPOE function of CEHRT to not be retained in order for it to count as CPOE could have unforeseen and possibly detrimental consequences for quality control. We continue to believe that our original proposal would have increased CPOE's ability to improve safety and efficiency and encourage all providers to streamline the ordering process to minimize the number of steps involved. However, we do not have sufficient information to determine whether the gains of the proposal are greater than or less than the potential cost of not retaining written or electronic orders issued before the use of the CPOE function. Therefore, we are not finalizing the proposed revised

description of when the CPOE function must be utilized during the ordering process and instead finalize our existing Stage 1 description that the CPOE function should be used the first time the order becomes part of the patient's medical record and before any action can be taken on the order. Based on the questions we have received on CPOE to date, the limiting criterion is the first time the order becomes part of the patient's medical record rather than the limitation of before any action can be taken on the order. The provider must make the determination as to what constitutes the patient's medical record and what does not based on their existing policies and applicable state and Federal law. Our only requirements in this regard are that the determination be made by the provider prior to the start of the EHR reporting period and be uniformly applied.

Comment: We have received many comments on who can enter the order into CEHRT for it to count as CPOE. Four possibilities received comment support. First, only the ordering provider be able to enter the order into CEHRT. Second, any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines can enter the order into CEHRT. This is the current policy which was proposed to continue. Third, an expansion to any licensed, certified or appropriately credentialed healthcare professional (some commenters replaced medical assistant with healthcare professional) who can enter orders into the medical record per state, local and professional guidelines. Fourth, an expansion to allow anyone, including those commonly referred to as scribes, enter the orders into the medical record per state, local and professional guidelines. We also note that there was some confusion among commenters as to our current limitation and proposal of any licensed healthcare professional using CPOE to create the first entry of the order into the patient's medical record as we received many comments suggesting that nurses should be able to enter the orders. We clarify that nurses who are licensed and can enter orders into the medical record per state, local and professional guidelines may enter the order into CEHRT and have it count as CPOE.

Response: As we did not revise our description of when in the ordering process the CPOE function must be used, we are inclined to not revise our description of who may enter it into CEHRT. However, we are particularly concerned with CPOE usage by EPs in this regard. Many EPs practice without the assistance of other licensed healthcare professionals. These EPs in their comments urged the expansion indicated in the third possibility of credentialed healthcare professionals/medical assistants. We believe that this expansion is warranted and protects the concept that the CDS interventions will be presented to someone with medical knowledge as opposed to a layperson. The concept of credentialed healthcare professionals is over broad and could include an untold number of people with varying qualifications. Therefore, we finalize the more limited description of including credentialed medical assistants. The credentialing would have to be obtained from an organization other than the employing organization. Our responses to earlier comments factored into this decision as well. Based on the public comments received, questions submitted by the public on Stage 1 and demonstrations of CEHRT we have participated in, it is apparent that the prevalent time when CDS interventions are presented is when the order is entered into CEHRT, and that not all EHRs also present CDS when the order is authorized (assuming such a multiple step ordering process is in place). This means that the person entering the order could be required to enter the order correctly, evaluate CDS either using their own judgment or through accurate relay of the information to the ordering provider, and then either make a change to the order based on the CDS intervention or bypass the intervention. We do not believe that a layperson is qualified to do this, and as there is no licensing or credentialing of scribes, there is no guarantee of their qualifications.

Comment: We received comments on a particular category of orders referred to as ''protocol'' or ''standing'' orders. The defining characteristic of these orders is that they are not created due to a specific clinical determination by the ordering provider for a given patient, but rather are pre-determined for patients with a given set of characteristics (for example, administer medication X and order lab Y for all patients undergoing a certain procedure or refills for given medication). Commenters maintain that these orders require special treatment in regards to when they are entered into CEHRT and who enters them. Commenters indicate that administrative staff should be allowed to enter them, but not override any CDS interventions that may appear.

Response: We agree that this category of orders warrant different considerations than orders that are due to a specific clinical determination by the ordering provider for a specific patient. We therefore allow providers to exclude orders that are predetermined for a given set of patient characteristics or for a given procedure from the calculation of CPOE numerators and denominators. Note this does not require providers to exclude this category of orders from their numerator and denominator. We foresee two circumstances where a provider would not want to exclude this category of orders. The first is that they disagree that these type of orders warrant different considerations and therefore enter them according to our description of CPOE. The second is providers who are unable to separate them from other orders in their calculation of the denominator and numerator.

Comment: Commenters mostly support the expansion to the laboratory and radiology orders. Three concerns were raised. First, commenters believed that as laboratory and radiology orders were new additions they should have a lower threshold than medication orders. Second, commenters desired a more descriptive definition on what constitutes a laboratory and particularly a radiology order. Third, commenters suggested that laboratory and radiology orders should be delayed for EPs until more laboratory and radiology providers could receive the order electronically.

Response: We discuss the measure separately later in this section and address the comments on the threshold there. We describe laboratory services as any service provided by a laboratory that could not be provided by a non-laboratory. Laboratory is defined at 42 CFR 493.2 as: ''a facility for the biological, microbiological, serological, chemical, immunohematological, hematological, biophysical, cytological, pathological, or other examination of from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of any disease or impairment of, or the assessment of the health of, human beings. These examinations also include procedures to determine, measure, or otherwise describe the presence or absence of various substances or organisms in the body. Facilities only collecting or preparing specimens (or both) or only serving as a mailing service and not performing testing are not considered laboratories.'' We describe radiologic services as any imaging service that uses electronic product radiation. Electronic product radiation is defined at 21 CFR 1000.3 as: ''any ionizing or nonionizing electromagnetic or particulate radiation, or [a]ny sonic, infrasonic, or ultrasonic wave that is emitted from an electronic product as the result of the operation of an electronic circuit in such product.''

If the provider desires to include other types of imaging services that do not rely on electronic product radiation they may do so as long as the policy is consistent across all patients and for the entire EHR reporting period. Finally, as we discuss in the next comment and response, electronic transmission of the order is not a requirement for CPOE.

Comment: Some commenters stated that while CPOE is a commonly understood function in the hospital setting, in the ambulatory setting its use is more ambiguous. For medication orders, the difference between CPOE for the medication and e-prescribing the medication is more subtle. The expansion to laboratory and radiology further complicates this in the ambulatory setting as most laboratory and radiology orders are sent to a third party which may or may not be able to receive such orders electronically.

Response: While we agree that the concept of CPOE is a more definitive action in the ordering process in the hospital setting, we believe that it is still integral to the ambulatory setting and serves the same purposes in both settings as a trigger for CDS interventions and as a way to increase the efficiency and safety of the ordering process. CPOE is the entry of the order into the patient's EHR that uses a specific function of CEHRT. It is not how that order is filled or otherwise carried out. For medications, on the ambulatory side CPOE feeds into e-prescribing, and on the hospital side electronic medication administration record may be used, but neither of these are requirements for CPOE. For example, a medication could be entered into CEHRT using CPOE and then be electronically transmitted to a pharmacy. This would be both CPOE and e-prescribing. However, a medication could be entered into CEHRT using CPOE and then a printed copy of the prescription could be generated by CEHRT and given to the patient. This would still be CPOE, but not e-prescribing. Similarly, whether the ordering of laboratory or radiology services using CPOE in fact results in the order being transmitted electronically to the laboratory or radiology provider does not dictate whether CPOE was met. CPOE is a step in a process that takes place in both hospital and ambulatory settings, and we continue to believe it is relevant to both settings.

After consideration of the public comments received, we are modifying this objective for EPs as § 495.6(j)(1)(i) and for eligible hospitals and CAHs at § 495.6(l)(1)(i) to use the same language as Stage 1 (with the addition of laboratory and radiology orders), as we did not finalize our proposed changes to when the order must be entered: ''Use computerized provider order entry (CPOE) for medication, laboratory, and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local, and professional guidelines.''

Proposed Measure: More than 60 percent of medication, laboratory, and radiology orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.

In Stage 1 of meaningful use, we adopted a measure of more than 30 percent of all unique patients with at least one medication in their medication list seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have at least one medication order entered using CPOE. In the Stage 1 final rule, we adopted a threshold of 60 percent for this measure for Stage 2.

In our proposed rule, we discussed how our experience with Stage 1 has shown that the denominator of all orders created by the EP or in the hospital would not be unduly burdensome for providers and creates a better measurement for CPOE usage, particularly for EPs who infrequently order medications. We explained that the denominator recommended by the HITPC of ''patients with at least one type of order'' is a proxy measure for the number of orders issued. We asked for comments on whether the barriers to collecting information for our proposed denominator would be greater in a hospital or ambulatory setting. We also requested that commenters suggest different denominators or measures and encouraged any commenter proposing an alternative denominator to discuss whether the proposed threshold or an alternative threshold should be used for this measure and to include any exclusions they believe are necessary based on their alternative denominator.

We also stated in our proposed rule that we believed providers do not roll out CPOE for only one order type, but rather for a package of order types. The HITPC had recommended a percentage threshold for laboratory orders, but a yes/no attestation of one order for radiology (not for both laboratory and radiology, as we mistakenly stated in the proposed rule). We also expressed concerns in the proposed rule about the possibility that an EP, eligible hospital or CAH could create a test environment to issue the one order and not roll out the capability widely or at all. For these reasons, we proposed a percentage threshold for all three types of orders: medication, laboratory, and radiology.

Comment: Commenters both supported and opposed the new denominator for CPOE. Those supporting the proposed denominator did so for its simplicity and greater accuracy for measuring actual CPOE usage. Commenters that opposed the proposed denominator did so for one of two reasons. Either they were concerned with the burden associated with counting paper or other orders that are never entered into CEHRT or they were concerned that the proposed denominator requires much higher performance of CPOE usage. For example, in the hospital setting an inpatient might have 20 orders during a stay. Under the proposed denominator, 13 of those orders would have to be entered using CPOE, while under the current denominator only one order would have to be entered using CPOE. A few commenters opposed the new denominator for both reasons.

Response: In regards to the perceived higher performance of CPOE usage required by switching from the Stage 1 denominator to the Stage 2 proposed denominator, the sole purpose of the proxy measure for CPOE used in Stage 1 was to alleviate the measurement burden, not create a lower level of CPOE usage than implied by the percentage threshold. Therefore, as a more accurate measure is possible, it should reflect the percentage of CPOE use indicated by the established thresholds. In regards to the burden of the measure, we had stated in our proposed rule that the reason we believed we could move to the proposed denominator was feedback from many providers indicating that they could in fact measure the proposed denominator. In addition due to problems associated with the proxy for EPs who have comprehensive medication lists for their patients, but were not the ordering provider for many of those medications some EPs were having to use an alternative measure issued through guidance (*https://questions.cms.gov/faq.php?id=5005&faqId=3257*) that allowed them to only include patients with medications the EP had ordered. We assume in determining the measures of meaningful use that the patient's medical record conforms to existing Federal and state laws, which we believe would generally require that all orders issued by a provider for a patient become part of the patient's medical record (for example, 42 CFR 482.24(c)(2)(vi)). Therefore, the concept that some orders do not become part of

the CEHRT means that the provider is maintaining patient medical records both electronically in CEHRT and outside of CEHRT using either paper charts or another electronic system. When a provider starts their first Stage 2 EHR reporting period, they will have been using CEHRT for at least 15 months. In our proposed rule, we have stated our belief that most providers would have fully transitioned patients' medical records to CEHRT by the time they start Stage 2. However, as discussed previously, we are leaving open the option for limiting certain measures to only those records maintained in CEHRT. As this is one of those measures, there is no reason to change the measure to accommodate patient records not maintained in CEHRT as provider can choose to not include records not maintained in CEHRT in the denominator. Thus, we finalize the denominator as proposed.

Comment: Commenters requested clarification on whether the measure puts all medication, laboratory and radiology orders in the same denominator and therefore it was potentially possible to meet the 60 percent threshold without CPOE being used 60 percent of the time for one or more order type, up to and including the possibility that CPOE may never be used for one or more order type. Many commenters suggested that if all orders were in the same denominator this was not a good measure of the expansion of CPOE to laboratory and radiology and that the orders should be broken out separately. Only a few commenters suggested that the denominator should be the aggregate of all three types of orders.

Response: We agree with the commenters that an aggregate denominator does not best reflect our expansion to laboratory and radiology and therefore create a separate denominator for each order type. This is consistent with the suggestions of the majority of commenters and most accurately reflects the use of CPOE. While CPOE does not require the electronic transmission of the order, many CEHRT will be linked to the technology systems that manage medication, as well as those for laboratories and radiology departments. These systems may be different thereby presenting unique challenges for each order type that could result in differing roll out times and utilization rates. In addition, a provider with a high number of one order type compared to others may even be able to reach a combined threshold without implementing CPOE for one or more of the order types. This would negate the benefits of expanding CPOE to these order types. We have exclusionary criteria for those providers who so infrequently issue an order type that it is not practical to implement CPOE for that order type.

Comment: We received several suggestions on the percentage threshold for medication orders to reduce it below 60 percent. The suggestions ranged from 50 percent to 30 percent. Two reasons were given. First, that 60 percent was simply too high. Second, that the proposed denominator made 30 percent a much higher bar than it was when the proxy was in place and the threshold should not be raised until we have data based on the proposed denominator.

Response: As we stated previously, the purpose of the proxy denominator was not to create a lower bar than CPOE usage at 30 percent, but to address measurement burden. While we agree that the information generated using the proxy denominator for CPOE is different from the finalized denominator, this is only true in a limited set of circumstances, especially for EPs. For it to be different at all, a provider must have ordered more than one medication for a patient during the EHR reporting period. Furthermore, this is most likely limited to providers who see a patient on more than one occasion. We believe it would be highly unlikely that a provider would use CPOE to order one medication and then not use it to order another during the same encounter or admission. For these reasons, we believe that while not a perfect correlation the information gained through Stage 1 attestations. The Stage 1 attestations provide a reasonable basis on which to set the Stage 2 thresholds. We believe it is reasonable to expect the actual use of CPOE to increase from 30 percent in Stage 1 to 60 percent in Stage 2 and consist with the expectations that were finalized in the Stage 1 regulations. Therefore, for medication orders, we finalize the threshold at 60 percent.

Comment: Some commenters maintain that the addition of laboratory and radiology orders to CPOE is a new function and should not be introduced at the same threshold.

Response: Based on the same logic supporting the 60 percent threshold for medication orders (that is, 30 percent is reasonable when CPOE is first introduced for an order type, and 60 percent in the next stage following CPOE introduction), we agree with the commenters that the thresholds should be different. We finalize a threshold of 30 percent for each laboratory and radiology orders.

After consideration of the public comments received, we are splitting the proposed measure into three measures and changing the threshold for radiology and laboratory orders at § 495.6(j)(1)(ii) for EPs and § 495.6(l)(1)(ii) for eligible hospitals and CAHs.

- More than 60 percent of medication orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.
- More than 30 percent of laboratory orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.
- More than 30 percent of radiology orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(1).

As discussed in the comment and response section, an EP, eligible hospital or CAH can limit the denominators to only include medication, laboratory and radiology orders for patients whose records are maintained using CEHRT.

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of medication orders created by the EP or authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of orders in the denominator recorded using CPOE.
- *Threshold:* The resulting percentage must be more than 60 percent in order for an EP, eligible hospital or CAH to meet this measure.

Exclusion: Any EP who writes fewer than 100 medication orders during the EHR reporting period.

- *Denominator:* Number of radiology orders created by the EP or authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of orders in the denominator recorded using CPOE.
- *Threshold:* The resulting percentage must be more than 30 percent in order

for an EP, eligible hospital or CAH to meet this measure.

Exclusion: Any EP who writes fewer than 100 radiology orders during the EHR reporting period.

• *Denominator:* Number of laboratory orders created by the EP or authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

• *Numerator:* The number of orders in the denominator recorded using CPOE.

• *Threshold:* The resulting percentage must be more than 30 percent in order for an EP, eligible hospital or CAH to meet this measure.

Exclusion: Any EP who writes fewer than 100 laboratory orders during the EHR reporting period.

An EP through a combination of meeting the thresholds and/or exclusions must satisfy all three measures for this objective.

A hospital must meet the thresholds for all three measures.

Proposed EP Objective: Generate and transmit permissible prescriptions electronically (eRx).

In the proposed rule, we noted that the use of electronic prescribing has several advantages over having the patient carry the prescription to the pharmacy or directly faxing a handwritten or typewritten prescription to the pharmacy. When the EP generates the prescription electronically, CEHRT can recognize the information and can provide decision support to promote safety and quality in the form of adverse interactions and other treatment possibilities. The CEHRT can also provide decision support that promotes the efficiency of the health care system by alerting the EP to generic alternatives or to alternatives favored by the patient's insurance plan that are equally effective. Transmitting the prescription electronically promotes efficiency and safety through reduced communication errors. It also allows the pharmacy or a third party to automatically compare the medication order to others they have received for the patient. This comparison allows for many of the same decision support functions enabled at the generation of the prescription, but bases them on potentially greater information.

We proposed to continue to define prescription as the authorization by an EP to dispense a drug that will not be dispensed without such authorization. This includes authorization for refills of previously authorized drugs. We proposed to define a permissible prescription as all drugs meeting the definition of prescription not listed as a controlled substance in Schedules II–V *http://www.deadiversion.usdoj.gov/schedules/index.html.* Although the Drug Enforcement Administration's (DEA) interim final rule on electronic prescriptions for controlled substances (75 FR 16236) removed the Federal prohibition to electronic prescribing of controlled substances, some challenges remain including more restrictive state law and widespread availability of products both for providers and pharmacies that include the functionalities required by the DEA's regulations. We asked for public comments as to whether over the counter (OTC) medicines will be routinely electronically prescribed and proposed to continue to exclude them from the definition of a prescription.

In our proposed rule we discussed several different workflow scenarios are possible when an EP prescribes a drug for a patient. First, the EP could prescribe the drug and provide it to the patient at the same time, and sometimes the EP might also provide a prescription for doses beyond those provided concurrently. Second, the EP could prescribe the drug, transmit it to a pharmacy within the same organization, and the patient would obtain the drug from that pharmacy. Third, the EP could prescribe the drug, transmit it to a pharmacy independent of the EP's organization, and the patient would obtain the drug from that pharmacy. Although each of these scenarios would result in the generation of a prescription, the transmission of the prescription would vary. In the first situation, there is no transmission. In the second situation, the transmission may be the viewing of the generation of the prescription by another person using the same CEHRT as the EP, or it could be the transmission of the prescription from the Certified EHR Technology used by the EP to another system used by the same organization in the pharmacy. In the third situation, the EP's Certified EHR Technology transmits the prescription outside of their organization either through a third party or directly to the external pharmacy. These differences in transmissions create differences in the need for standards. We proposed that only the third situation would require standards to ensure that the transmission meets the goals of electronic prescribing. In the first two scenarios one organization has control over the whole process. In the third scenario, the process is divided between organizations. In that situation, standards can ensure that despite the lack of control the whole process functions reliably. To have successfully e-prescribed, we proposed that the EP needs to use CEHRT as the sole means of creating the prescription, and when transmitting to an external pharmacy that is independent of the EP's organization such transmission must use standards adopted for EHR technology certification.

We did not receive any public comments on this objective, therefore, we are finalizing this objective at § 495.6(j)(2)(i) as proposed.

Proposed EP Measure: More than 65 percent of all permissible prescriptions written by the EP are compared to at least one drug formulary and transmitted electronically using CEHRT.

We proposed a new exclusion for Stage 2 that would allow EPs to exclude this objective if no pharmacies within 25 miles of an EP's practice location at the start of his/her EHR reporting period accept electronic prescriptions. This is 25 miles in any straight line from the practice location independent of the travel route from the practice location to the pharmacy. We stated that EP's practicing at multiple locations would be eligible for the exclusion if any of their practice locations that are equipped with CEHRT meet this criteria. An EP would not be eligible for this exclusion if he or she is part of an organization that owns or operates its own pharmacy within the 25-mile radius regardless of whether that pharmacy can accept electronic prescriptions from EPs outside of the organization. We also proposed an exclusion for EPs who write fewer than 100 prescriptions during the EHR reporting period.

Comment: Most commenters agreed with the exclusion of controlled substances in the denominator. They were concerned about industry readiness as well as potentially conflicting state regulations. Other commenters expressed concerns that specialists (that is, surgeons, psychiatrists) who write prescriptions that are not permissible (that is, controlled substances) would not be able to meet the measure.

Response: We agree with the commenters and will continue to exclude controlled substances from the denominator. However, we are also adding an alternative denominator to provide additional flexibility for EPs who are able to electronically prescribe controlled substances and want to count these prescriptions in the measure.

Comment: Most commenters did not support the inclusion of OTC medicines in this objective, as OTC medicines are not usually intended for the pharmacy to fill. Those commenters who did support it noted that OTC medicines are

prescribed often times because it allows patients to use their health care spending accounts to pay for the cost.

Response: After consideration of public comments, we agree with the majority of commenters in that OTC medicines should not be included as a part of this objective. While some OTC medicines are ordered by the EP, the low prevalence of such occurrences means the costs of including them in both measurement and actual e-prescribing outweighs any benefit of inclusion.

Comment: Most commenters thought the proposed threshold was too high or just right. Those who thought it was too high expressed concerns about the abilities of mail-order pharmacies to accept electronic subscriptions. Some commenters suggested lowering the threshold to 50 percent. Other commenters expressed concerns that patients may prefer a paper prescription and suggested excluding those patients from the denominator. The commenters who thought the proposed threshold was ''just right'' noted that most EPs who successfully demonstrated meaningful use for Stage 1 far exceeded the Stage 1 threshold of 40 percent.

Response: Preliminary analysis of Stage 1 meaningful use attestation data shows that those EPs who successfully attested for this measure exceeded the 40 percent threshold—many reporting thresholds of 80–100 percent. However, the Surescripts Q4 2011 Report suggests that close to 40 percent of physicians who began e-prescribing in 2008 meet the 65 percent threshold. This report only represents the earliest adopters. Based on public comments, we believe the 65 percent threshold we proposed may be unattainable for many EPs and question whether any real difference in provider behavior is achieved with a 65 percent threshold versus a 50 percent threshold. This lower threshold also accounts for patients who may prefer a paper prescription, rather than having their prescription sent to a pharmacy electronically. After consideration of public comments, we are finalizing the threshold for this measure at 50 percent.

Comment: Most commenters supported comparing prescriptions written by the EP to a drug formulary, but not without concern. Many noted that drug formularies are not always readily available, are linked to specific payers, or may not otherwise be readily available.

Response: After review of the public comments, we realize this measure needs to be further clarified. We recognize that not every patient will have a formulary that is relevant for him or her. Therefore, we require not that the CEHRT check each prescription against a formulary relevant for a given patient, but rather that the CEHRT check each prescription for the existence of a relevant formulary. If a relevant formulary is available, then the information can be provided. We believe that this initial check is essentially an on or off function for the CEHRT and should not add to the measurement burden. Therefore, with this clarification of the check we are referring to, we are finalizing the drug formulary check as a component of this measure. We look forward to the day when a relevant formulary is available for every patient. We also modified the measure to use the word ''query'' instead of ''compare'' because it better explains the process in which the EP uses the CEHRT to consult the information provided in the formulary.

Comment: Many commenters expressed concerns about patients who request paper copies of their prescriptions and how they would be accounted for in this measure. Commenters also expressed concerns about patients who prefer to use mail-order pharmacies that do not accept eRx.

Response: We have accounted for patient preferences by lowering the threshold for this measure from 65 percent to 50 percent.

Comment: Many commenters expressed concerns that the word ''permissible'' was omitted from the proposed exclusion for EPs who write fewer than 100 prescriptions during the EHR reporting period.

Response: We agree with commenters in that we inadvertently omitted the word ''permissible'' from this exclusion. After consideration of public comments, we are finalizing this exclusion as ''EPs who write fewer than 100 *permissible* prescriptions during the EHR reporting period.''

Comment: Many commenters supported this exclusion but expressed concerns about how it was proposed and would be implemented. Some commenters suggested reducing the radius to 10 miles or less in urban areas and leaving it at 25 miles in rural areas. Other commenters suggested revising this exclusion for EPs where less than 20 percent of pharmacies e-prescribe within a 25-mile radius of their office. Other commenters expressed concerns that there may only be a limited number of pharmacies in their geographic area that can accept prescriptions electronically. Yet others suggested including a grace period for EPs in areas where no pharmacies e-prescribe at the beginning of their EHR reporting period, but later begin accepting eRx.

Response: We appreciate the commenters' concerns about this exclusion. We agree with commenters in that a 25-mile radius may be too large. We believe the 10-mile radius is more reasonable as it takes the country's geographic diversity (urban, suburban, rural areas) into account. We are therefore finalizing that if no pharmacies within a 10-mile radius of an EP's practice location at the start of the EHR reporting period accept electronic prescriptions, the EP would qualify for this exclusion, unless the EP is part of an organization that owns or operates a pharmacy within the 10-mile radius. As for patient preference, we agree with commenters that not all patients will want to go to a particular pharmacy just because they accept electronic prescriptions. However, we believe we accounted for patient preference by lowering the threshold for the measure to 50 percent.

After consideration of public comments, we are revising the measure at § 495.6(j)(2)(ii) to read: ''More than 50 percent of all permissible prescriptions, or all prescriptions, written by the EP are queried for a drug formulary and transmitted electronically using CEHRT.''

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(3) and 45 CFR 170.314(a)(10).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances during the EHR reporting period; or

  Number of prescriptions written for drugs requiring a prescription in order to be dispensed during the EHR reporting period.
- *Numerator:* The number of prescriptions in the denominator generated, queried for a drug formulary and transmitted electronically using CEHRT.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP to meet this measure.

Exclusions: Any EP who: (1) Writes fewer than 100 permissible prescriptions during the EHR reporting period; or (2) does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period.

Consolidated Objective: Maintain an up-to-date problem list of current and active diagnoses.

Consolidated Objective: Maintain active medication list.

Consolidated Objective: Maintain active medication allergy list.

For Stage 2, we proposed to consolidate the objectives for maintaining an up-to-date problem list, active medication list, and active medication allergy list with the Stage 2 objective for providing a summary of care for each transition of care or referral. We stated that we continue to believe that an up-to-date problem list, active medication list, and active medication allergy list are important elements to be maintained in CEHRT. However, the continued demonstration of their meaningful use in Stage 2 would be required by other objectives focused on the transitioning of care of patients removing the necessity of measuring them separately. Providing this information is critical to continuity of care, so we proposed to add these as required fields in the summary of care for the following Stage 2 objective: ''The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide a summary care record for each transition of care or referral.'' We stated that EPs and hospitals would have to ensure the accuracy of these fields when providing the summary of care, which we believe would ensure a high level of compliance in maintaining an up-to-date problem list, active medication list, and active medication allergy list for patients. The required standards for these fields are discussed in the ONC standards and certification final rule published elsewhere in this issue of the **Federal Register**.

Comment: Overall, we received very few comments on our proposal to consolidate the up-to-date problem list, active medication list, and active medication allergy list objectives. Some commenters opposed our proposal as they believe it would detract from the importance of these items. However, the vast majority of those who commented on this proposal supported the consolidation of these objectives.

Response: After consideration of public comments, we are finalizing the consolidation of these objectives as proposed for the reasons discussed in the proposed rule. The objectives of maintaining an up-to-date problem list, active medication list, and active medication allergy list will be consolidated with the Stage 2 objective for providing a summary of care for each transition of care or referral.

Proposed EP Objective: Record the following demographics: preferred language, gender, race and ethnicity, and date of birth.

Proposed Eligible Hospital/CAH Objective. Record the following demographics: preferred language, gender, race and ethnicity, date of birth, and date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.

We proposed to continue the policy that EPs, eligible hospitals and CAHs collect baseline demographic data for all unique patients in the EHR using OMB standards for race and ethnicity. The proposed rule outlines some of the numerous benefits from recording basic patient demographic information in the EHR, including improved patient-centered care and management of the health of populations. In response to multiple comments from the Stage 1 final rule regarding the preliminary cause of death data element required for eligible hospitals and CAHs, we clarified the following; this element is the preliminary cause of death recorded by the hospital and is not required to be amended when additional information becomes available, there is no specified timeframe for recording this element, and we invited additional public comment regarding these clarifications in the proposed rule. We also asked for public comment on the burden and ability to include additional measures of disability status, gender identity and/or sexual orientation.

Comment: We received many comments suggesting CMS differentiate between the terms sex and gender. One commenter provided the definition that the term sex is used in recording vital health statistics that describe the physiological characteristics at time of birth. The term gender incorporates behaviors, roles, and expectations corresponding to an individual's sex and is generally self reported.

Response: We appreciate this clarification and will incorporate the change in terminology for the final rule using the term sex instead of gender in EP, eligible hospital and CAH objectives for recording demographics. This change in terminology aligns with vital statistic reporting and the HHS final demographic data collection standards published October 31, 2011.

Comment: Several commenters indicated that the collection of race and ethnicity demographic information can be sensitive and patients may be unwilling or uncomfortable reporting this information to the individual collecting demographic data. Other comments supported CMS clarification in the Stage 1 final rule that providers can be allowed to account for patients who decline to provide elements of demographic information. Additional comments suggested that a single system parameter be developed to identify states that prohibit data reporting should be available to the EHR.

Response: If a patient declines to provide information of ethnicity or race or if capturing a patient's ethnicity or race is prohibited by state law, this should be duly noted as structured data in the EHR and this would still count as an entry for the purpose of meeting this measure. A study by the Agency for Healthcare Research and Quality (AHRQ) states that current state prohibitions on the collection of ethnicity and race apply to health plans' collection of data at the time of enrollment. Title VI of the Civil Rights Act of 1964 permits health care organizations to collect race, ethnicity, and preferred language patient data for the purpose of quality improvement.

Comment: Several commenters suggested that CMS use the same definition for race and ethnicity as the Centers for Disease Control and Prevention (CDC) and the United States Census Bureau. Other commenters were concerned about the need to collect data granular enough to identify differences between subpopulations and aligned across government programs.

Response: We recognize that the CDC has developed codes that allow for the mapping of more detailed race and ethnicity categories such as those maintained by the U.S. Bureau of the Census to the less detailed OMB standard. We appreciate that providers may need to collect more granular demographic data to manage their patient populations. For purposes of achieving Stage 2 of meaningful use, we will continue to rely on the OMB standard as a minimum standard for the collection of race and ethnicity data. EPs, eligible hospitals, and CAHs who wish to collect more granular level data on patient race and ethnicity may do so as long as they can map the data to 1 of the 5 races included in the existing OMB standards. The standards associated with the meaningful use objectives and measures are discussed further in the ONC standards and certification criteria final rule and we refer readers to that regulation published elsewhere in this issue of the **Federal Register**.

Comment: Many commenters agreed with the need to incorporate disability status in EHR technology. However, it was also clear that several of these commenters varied in their definition of disability with interpretations that ranged from physical, mental, occupational, and economic disability

status. Commenters also differed regarding the most appropriate location for the capture and storage of disability status data elements within the EHR. Suggestions for where to incorporate disability status data varied (for example; from the demographic objective, to physician notes, and/or the problem list component of the summary of care document). Another commenter suggested that the demographic objective should be limited to collecting data with static values and the active problem list, electronic notes and/or care summary documents that are continually updated would be more appropriate for recording changes in patient disability status.

Response: We wish to clarify that the term disability status used in the proposed rule was meant to be all-encompassing by incorporating both the concepts of physical and cognitive disabilities as well as the concept of functional status limitations that impact an individual's capability to perform activities in different environments. This latter concept incorporates metrics useful for planning and coordination across care settings. Commenters varied in their responses regarding the level of consensus on measurement standards for each of these health status measures. Since publishing the proposed rule we have learned that significant progress has been made regarding the capture of functional status into the consolidated clinical document architecture (C–CDA) standard for summary of care records. The C–CDA Implementation Guide provides the following examples that may be incorporated under functional status; assessments of a patient's language, vision, hearing, activities of daily living, behavior, general function, mobility, self-care status, physical state and cognitive function.[1] The C–CDA standards support the exchange of clinical documents between those involved in the care of a patient and allow for the re-use of clinical data for clinical care giving, public health reporting, quality monitoring, patient safety and clinical trials. This inclusion is addressed more fully under the discussion of the transition of care objective in this final rule.

We strongly support the adoption, implementation and meaningful use of CEHRT for all individuals and the reduction of barriers for persons with disabilities. In finalizing this rule, we also considered the operational challenges that could result from the lack of consensus noted by many commenters to incorporate a physical disability standard measure in the demographic section of CEHRT at this time. As a result, we will not require the collection of disability status data under the demographic objective for Stage 2 of meaningful use. However, we suggest that providers examine the questions developed by the HHS as required by section 4302 of the Affordable Care Act. The questions resulted from an interagency process and are closely aligned to the Census Bureau's American Community Survey and the International Classification of Disability. These questions may be found on the HHS Web site at *http://minorityhealth.hhs.gov/templates/content.aspx?ID=9232#1*. The answers to these questions could be incorporated as functional status or other data elements in the C–CDA summary of care document mentioned above and discussed more fully in the transition of care objective later in this rule.

We will continue to work with ONC, other federal agencies and seek the advice of the HIT Policy Committee to explore further how disability status could be included in meaningful use Stage 3.

Comments: Many commenters supported the proposed inclusion of recording gender identity and/or sexual orientation as part of the demographic objective. Other commenters suggested that the collection of this information is extremely sensitive and could be considered offensive for some patients especially when collected by administrative staff. Still other commenters did not see the clinical significance of collecting and recording this information in the demographic section of the EHR. Others commenters were against recording gender identity and/or sexual orientation because they did not consider this would provide additional clinical benefit. Still others suggested that the reporting of gender identity or sexual orientation be optional and up to individual clinician judgment whether or not it is appropriate to collect this information.

Similar to the comments for the proposed inclusion of disability status, commenters noted both the data collection challenges and data reporting burden. Many commenters were opposed to the mandatory collection of all three additional measures for Stage 2 of meaningful use and suggested that reporting could be optional.

Response: Considering the lack of consensus for the definition of the concept of gender identity and/or sexual orientation as well as for a standard measure of the concept and where it would be most appropriate to store the data within the EHR, we will await further development of a consensus for the goal and standard of measurement for gender identity and/or sexual orientation. Additionally, we note that many commenters raised concerns as to whether such data collection is necessary for all EPs, eligible hospital, and CAH regardless of specialty.

Comments: Several additional measures were suggested under the demographic objective including; measuring the level of access to and use of the internet, measuring computer literacy, and measuring standardized occupation using established industry codes.

Response: We appreciate the numerous comments suggesting additional demographic information that will allow providers to improve the quality of individual patient centered care as well as population health. We may consider these suggestions further in the development of Stage 3 of meaningful use.

Comment: A minority of commenters recommended removing the preliminary cause of death element altogether from the eligible hospital/CAH objective. Others suggested that the eligible hospital/CAH measure for preliminary cause of death be modified to simply capture whether or not the patient had a cause of death recorded, regardless of when that information was entered into the EHR, because the preliminary cause of death may often be inaccurate since by law the coroner or medical examiner makes the final determination for the patient's death certificate.

Response: We appreciate the suggestion for measure simplification. However, for this measure we want to respect the existing hospital workflow where a clinician evaluates the patient to pronounce the death. This preliminary cause of death is documented by the clinician in the patient's chart. We recognize that these workflows may change as EHR technology develops and becomes more widely adopted and the exchange of health information is able to link to vital statistic reporting. However, for the time being the measure of preliminary cause of death under the demographic objective will remain unchanged.

After consideration of the public comments received, we are modifying the meaningful use objective at § 495.6(j)(3)(i) of our regulations as follows: EPs ''Record all of the following demographics: Preferred language, sex, race, ethnicity, and date of birth.''

After consideration of the public comments received, we are modifying the meaningful use objective at § 495.6(l)(2)(i) of our regulations as

[1] Implementation Guide for CDA Release 2.0 (US REALM) July 2012, © 2012 Health Level Seven, Inc. Ann Arbor, MI.

follows: Eligible hospitals and CAHs ''Record all of the following demographics: Preferred language, sex, race, ethnicity, date of birth, date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.''

Proposed Measure: More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have demographics recorded as structured data.

Comment: Most commenters were supportive of the increased threshold for this measure.

Response: Our analysis of the meaningful use data for Stage 1 found that over 90 percent of EPs, eligible hospitals and CAHs were able to successfully report the demographic measure. Therefore, based on comments and actual performance data we do not foresee a burden in increasing the measure threshold from more than 50 percent in Stage 1 to greater than 80 percent in Stage 2.

After consideration of public comments, we are finalizing this measure for EPs at § 495.6(j)(3)(ii) and for eligible hospitals and CAHs at § 495.6(l)(2)(ii) as proposed.

We further specify that in order to meet this objective and measure an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(3).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital or CAH inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator who have all the elements of demographics (or a specific notation if the patient declined to provide one or more elements or if recording an element is contrary to state law) recorded as structured data.
- *Threshold:* The resulting percentage must be more than 80 percent in order for an EP, eligible hospital or CAH to meet this measure.

If a patient declines to provide one or more demographic elements this can be noted in the CEHRT and the EP or hospital may still count the patient in the numerator for this measure. The required elements and standards for recording demographics and noting omissions because of state law restrictions or patients declining to provide information will be discussed in the ONC standards and certification rule, published elsewhere in this issue of the **Federal Register**.

Proposed Objective: Record and chart changes in the following vital signs: height/length and weight (no age limit); blood pressure (ages 3 and over); calculate and display body mass index (BMI); and plot and display growth charts for patients 0–20 years, including BMI.

We proposed to continue our policy objective from Stage 1 to collect and record basic vital sign data for patients across health care settings. In the proposed rule, we outlined the benefits of documenting basic vital signs including that the data provides important clinical information on both the patient's current condition as well as the ability to track changes in patient status over time. For Stage 2, we proposed to remove the age restrictions on recording height/length and weight, and also proposed to remove the age restrictions on calculating and displaying BMI and growth charts. In addition, we proposed to modify the Stage 1 blood pressure guideline to align with the American Academy of Pediatrics guideline recommendations to measure blood pressure for children 3 years of age and older. We also proposed to continue our exclusions policy from Stage 1 (with modifications, as discussed below) for EPs who believe that recording and charting vital signs is outside the scope of their practice.

Comment: Several commenters questioned why all providers need to collect vital sign data when this information should be available from a robust health information exchange across providers.

Response: We will continue the Stage 1 meaningful use policy that any method of obtaining height, weight and blood pressure is acceptable for the purpose of this objective as long as the information is recorded as structured data in the CEHRT. As stated in the proposed rule, the vital sign information can be entered into the patient's medical record in a number of ways including: direct entry by the EP, eligible hospital, or CAH; entry by a designated individual from the EP, eligible hospital, or CAH's staff; data transfer from another provider electronically, through an HIE or through other methods; or data entered directly by the patient through a portal or other means. Some of these methods are more accurate than others, and it is up to the EP or eligible hospital to determine the level of accuracy needed to care for their patient and how best to obtain this information. We also look forward to the time when a more robust health information exchange network will allow providers to share relevant data across settings and/or alert providers when additional data should be obtained.

Comment: We received comments requesting that CMS include a statement clarifying which specialties would be included or excluded from this objective.

Response: We appreciate commenter's efforts to clarify this objective. However, we will continue our more general policy from Stage 1 (with modifications, as explained later) of allowing EPs to exclude this objective if they believe recording and charting changes in vital signs is not relevant to their scope of practice. We cannot define the scope of practice and/or interventions necessary for each individual patient and will continue to rely on provider determinations based on individual patient circumstances. Consider a hypothetical example of an elderly patient with multiple chronic conditions that includes depression. When the patient is seen by his behavioral healthcare provider to manage his depression, it is up to that provider to determine whether it would be medically necessary to record and chart the patient's weight in order to manage the patient's care.

After consideration of public comments, we are finalizing this objective for EPs at § 495.6(j)(4)(i) and for eligible hospitals and CAHs at § 495.6(l)(3)(i) as proposed.

Proposed Measure: More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.

We proposed to split the exclusions from Stage 1 such that an EP could choose to record height/length and weight only and exclude blood pressure, or record blood pressure only and exclude height/length and weight. We encouraged comments on this split and whether it should go both ways. We proposed to increase the threshold from more than 50 percent to more than 80 percent for this measure.

Comment: Several commenters agreed with the policy that height/length, weight, and blood pressure do not each need to be updated by a provider neither at every patient encounter nor even once per patient seen during the EHR reporting period.

Response: We will maintain our policy from Stage 1 that it is up to the EP or hospital to determine whether height/length, weight, and blood

pressure each need to be updated, the level of accuracy needed to care for their patient, and how best to obtain the vital sign information that will allow for the right care for each patient.

Comment: Another commenter suggested that CMS clarify that the growth charts and BMI are not part of the actual measure for this objective.

Response: We clarify that to satisfy the measure of this objective, the CEHRT must have the capability to calculate BMI and produce growth charts for patients as appropriate. Since BMI and growth charts are only produced when height/length and weight vital sign data are captured in the CEHRT, the measure is limited to these data elements.

Overall commenters supported the added flexibility of our proposal to split the exclusion and allow EPs to record blood pressure only or height/length and weight only. Our analysis of the meaningful use data for Stage 1 found that over 90 percent of EPs, eligible hospitals and CAHs were able to successfully report the vital signs measure. We did not propose additional measure elements that could increase the reporting burden at this time.

After consideration of the public comments received, we are finalizing this measure as proposed for EPs at § 495.6(j)(4)(ii) and for eligible hospitals and CAHs at § 495.6(l)(3)(ii).

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(4). The ability to calculate the measure is included in CEHRT.

To calculate the percentage, CMS and ONC have worked together to define the following:

- *Denominator:* Number of unique patients seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* Number of patients in the denominator who have at least one entry of their height/length and weight (all ages) and/or blood pressure (ages 3 and over) recorded as structured data.
- *Threshold:* The resulting percentage must be more than 80 percent in order for an EP, eligible hospital, or CAH to meet this measure.
- *Exclusions:* Any EP who sees no patients 3 years or older is excluded from recording blood pressure. Any EP who believes that all 3 vital signs of height/length, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them. Any EP who believes that height/length and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure. Any EP who believes that blood pressure is relevant to their scope of practice, but height/length and weight are not, is excluded from recording height/length and weight.

Proposed Objective: Record smoking status for patients 13 years old or older.

We stated in the proposed rule that accurate information on smoking status provides context to a high number and wide variety of clinical decisions, such as immediate needs for smoking cessation or long-term outcomes for chronic obstructive pulmonary disease. Cigarette smoking is a key component to the current Million Hearts Initiative (*http://millionhearts.hhs.gov*). We did not propose rules on who may record smoking status or how often the record should be updated. In addition, we proposed to continue the age limitation at 13 years old. We also requested comments specifically on the possible inclusion of other forms of tobacco use and second hand smoke.

Comment: We have received comments that assert that the objective is not relevant to a significant number of EPs due to their scope of practice and that it is redundant to the clinical quality measure ''National Quality Forum (NQF) 28: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention''. Some of the comments suggest that it should be eliminated and those EPs for whom it is relevant select the CQM.

Response: We disagree that the proposed objective and the clinical quality measure identified by commenters serve the same purpose and therefore only one should be included. The objective seeks to ensure that information on smoking status is included in the patient's record. Furthermore, that the information is stored in a structured format so that it can automatically be identified by CEHRT as smoking status for possible reporting or exchanging. We also note that the clinical quality measure only focuses on patients 18 years or older, while the objective focuses on patients 13 years or older. In addition, many quality measures related to smoking are coupled with follow-up actions by the provider such as counseling. We consider those follow-up actions to be beyond the scope of what we hope to achieve for this objective and would move the objective beyond the scope of practice for many providers. We disagree that the objective is not relevant to EPs seeing patient 13 years old or older. We note that this is intended to inform the provider. The frequency of when the information is updated, detail beyond the standard included in certification of EHR technology and many other factors discussed later are all left up to the provider to decide and fit to their scope of practice and their patient population.

Comment: We received conflicting suggestions in comments regarding the age limitation. These comments can be divided into those suggesting a lower age (as low as 8 to 12), those supporting 13 years old and those who believe it should be raised to 18 to match the clinical quality measures associated with smoking.

Response: It is apparent from the comments that the appropriate age for smoking status is an elusive target highly dependent on the situation. For example, it was suggested in comments that the age be lowered for patients meeting certain characteristics such as parents who smoke or other risk factors, while remaining at 13 for other patients. In our review of the public comments, we do not believe a consensus has been reached on a different age limitation than our Stage 1 age limitation of 13 years old and therefore finalize the age limitation as proposed. As with other meaningful use objectives and measures, this represents a minimum requirement. We encourage each and every provider to evaluate whether their scope of practice and/or patient population calls for collecting smoking status on patients younger than 13 or more detailed information than required by this objective.

Comment: There continues to be strong support for expanding smoking to other forms of tobacco use. Commenters note that other types of tobacco use are supported by the clinical quality measure ''NQF 28: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention''.

Response: We refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register** for discussions on the adoption of a standard that would support other types of tobacco use. As ONC did not adopt a standard supporting other forms of tobacco use, we do not expand the objective.

Comment: Some commenters expressed strong support for the inclusion of second-hand smoke either as part of this objective or as a separate objective.

Response: We agree with the importance of collecting second-hand smoke information for many EPs and hospitals. However, as with other forms of tobacco use, there is not a standard on which to base the requirement of

collection of this information as structured data.

After consideration of the public comments received, we are finalizing this objective as proposed for EPs as § 495.6(j)(5)(i) and for eligible hospitals and CAHs at § 495.6(l)(4)(i).

Proposed Measure: More than 80 percent of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period have smoking status recorded as structured data.

In our proposed rule, based on Stage 1 data showing performance on this measure far exceeded the measure threshold of more than 50 percent, we proposed a threshold of more than 80 percent for this measure for Stage 2 of meaningful use.

Comment: We received comments asking for clarification on what must be recorded in the EHR and how often for the numerator to be met.

Response: Information on smoking status must be present as structured data using the standard specified at 45 CFR 170.314(a)(11). There is no requirement that the smoking status be entered into the record by a specific person or category of persons, there is no requirement that smoking status be entered into the CEHRT already in the terminology of the standard and there is no requirement on how frequently this information be updated. A patient indicating how many packs he smokes a day on a new patient questionnaire which is then entered by an administrative person and mapped in the CEHRT to one of the responses in the standard is valid for this measure. A physician could also ask a patient detailed questions to determine if the patient is a current smoker, input the information into the CEHRT, and select one of the responses of the standard. ONC has provided a mapping of SNOMED CT® ID to the descriptions at 45 CFR 170.314(a)(11).

Comment: We received a few comments on the threshold. Most were supportive, while others believe it should remain at 50 percent.

Response: Due to our analysis of performance on this measure from Stage 1 and the support received from commenters, we are finalizing the threshold as proposed.

After consideration of public comments, we are finalizing this measure as proposed for EPs at § 495.6(j)(5)(ii) and for eligible hospitals and CAHs at § 495.6(l)(4)(ii).

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(11).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients age 13 or older seen by the EP or admitted to an eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator with smoking status recorded as structured data.
- *Threshold:* The resulting percentage must be more than 80 percent in order for an EP, eligible hospital, or CAH to meet this measure.
- *Exclusion:* Any EP, eligible hospital, or CAH that neither sees nor admits any patients 13 years old or older.

CQM Reporting as a Stage 2 Objective—We proposed to add CQM reporting to the definition of ''meaningful EHR user'' under § 495.4 instead of including it as a separate objective under § 495.6. Accordingly, we did not propose a CQM reporting objective for EPs and hospitals as part of the Stage 2 criteria under § 495.6.

Comment: While some commenters indicated that this change would be confusing, most commenters supported this change.

Response: We appreciate the support of commenters and believe including CQM reporting in the definition of ''meaningful EHR user'' under § 495.4 will actually alleviate confusion. Therefore, we are not finalizing an objective related to the reporting of CQMs in the Stage 2 criteria for meaningful use under § 495.6. Although CQM reporting is not listed as a separate objective and measure under § 495.6, it remains a condition for demonstrating meaningful use.

Consolidated Objective: Implement drug-drug and drug-allergy interaction checks.

For Stage 2, we proposed to make the objective for ''Implement drug-drug and drug-allergy checks'' one of the measures of the core objective for ''Use clinical decision support to improve performance on high-priority health conditions.'' We noted our belief that automated drug-drug and drug-allergy checks provide important information to advise the provider's decisions in prescribing drugs to a patient. Because this functionality provides important clinical decision support that focuses on patient health and safety, we proposed to include this functionality as part of the objective for using clinical decision support.

We discuss comments regarding this consolidation in the discussion of the clinical decision support objective.

Proposed Objective: Use clinical decision support to improve performance on high-priority health conditions.

We proposed to modify the clinical decision support (CDS) objective for Stage 2 such that CDS would be used to improve performance on high-priority health conditions. We stated it would be left to the provider's clinical discretion to select the most appropriate CDS interventions for their patient population. We also proposed that the CDS interventions selected must be related to five or more of the clinical quality measures (CQMs) on which providers would be expected to report. The goal of the proposed CDS objective is for providers to implement improvements in clinical performance for high-priority health conditions that will result in improved patient outcomes.

Comment: A few commenters voiced concern regarding the maturity of the development of clinical decision support systems. Others voiced a misconception that not all CEHRT includes pre-built CDS interventions where both capabilities and content are vendor supplied. The commenter went on to clarify that the CDS interventions must be specific to each provider's requirements. Still others commented on the CMS change in terminology from CDS ''rules'' to CDS ''interventions'' increases the range of available interventions.

Response: We recognize commenters' concerns regarding the maturity of CDS systems. Closely linked to the development of EHRs, there are multiple factors impacting the evolution of CDS systems including; the increasing availability and sophistication of information technology in clinical settings, the increasing pace of publication of new evidence-based guidelines for clinical practice and the continual evaluation and improvements of CDS.[2] We clarify that all CEHRT includes CDS interventions. The companion ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register** includes further information regarding the criteria necessary to implement CDS in CEHRT

[2] Study Protocol for the Effects of computerized clinical decision support systems on practitioner performance and patient outcome: Methods of a decision-maker-researcher partnership systematic review. R Brian Haynes*, Nancy L Wilczynski and the Computerized Clinical Decision Support System (CCDSS) Systematic Review Team. IMPLEMENTATION SCIENCE 2010, 5:12.

for Stage 2 of meaningful use. With each incremental phase of meaningful use, CDS systems progress in their level of sophistication and ability to support patient care. For Stage 2 of meaningful use, it is our expectation that at a minimum, providers will select clinical decision support interventions to drive improvements in the delivery of care for the high-priority health conditions relevant to their patient population. Continuous quality improvement requires an iterative process in the implementation and evaluation of selected CDS interventions that will allow for ongoing learning and development. In this final rule, we will consider a broad range of CDS interventions that improve both clinical performance and the efficient use of healthcare resources in measuring providers' ability to demonstrate the meaningful use of CEHRT for Stage 2.

After consideration of the public comments received, we are finalizing this objective as proposed for EPs at § 495.6(j)(6)(i) and for eligible hospitals and CAHs at § 495.6(l)(5)(i).

Proposed Measure: We proposed two measures for EPs, eligible hospitals and CAHs for this objective. Both of the measures must be met in order for the provider to satisfy this objective:

1. Implement five clinical decision support interventions related to five or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period; and

2. The EP, eligible hospital, or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.

We proposed to make the Stage 1 objective for ''implement drug-drug and drug-allergy interaction checks'' one of the measures of the CDS objective for Stage 2. Based on the HIT Policy Committee's recommendation, we proposed that each CDS intervention must enable providers to review all of the following attributes for the intervention: developer of the intervention, bibliographic citation, funding source of the intervention, and the release or revision date of each intervention. The ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register** provides additional information regarding the incorporation of the CDS in CEHRT. We proposed that providers must implement the CDS intervention at a relevant point in patient care when the intervention can influence clinical decisionmaking before an action is taken on behalf of the patient. We proposed that providers must implement five CDS interventions that they believe will result in improvement in performance for five or more of the clinical quality measures on which they report. If none of the clinical quality measures is applicable to an EP's scope of practice, the EP should implement a CDS intervention that he or she believes will be effective in improving the quality, safety, or efficiency of patient care.

Comment: Many commenters noted that at least one of the CDS interventions implemented should be tied to efficiency goals (for example, reducing the overuse of high-cost procedures).

Response: While we believe that it is entirely possible for a CDS intervention to improve both the quality of care and improve healthcare efficiency, we agree with the suggestion that at least one intervention could be tied directly to improving the efficient use of healthcare resources. In considering whether a CDS intervention increases healthcare efficiency, providers can consider improvements in any healthcare process. Some examples, of CDS interventions that may lead to improvements in healthcare efficiency include, alerts when duplicate tests, procedures or treatments are ordered for the same patient, using clinical guidelines for direct patient care processes, documentation templates to reduce variability in recording and alerting when outside of specified parameters, and using evidence based pre-specified order sets for blood products. Therefore, we are modifying the proposed CDS measure such that four of the CDS interventions are related to four or more CQMs, and the fifth CDS intervention should be related to improving healthcare efficiency. We clarify that any of the five CDS interventions may be related to both CQMs and improving healthcare efficiency.

Comment: Various comments were received in response to the proposed number of CDS interventions that are related to five or more CQMs. One commenter noted the potential for improved provider reporting and user efficiencies due to the inherent measure associations. Several commenters welcomed this improved alignment of CQM measures and reporting between the EHR Incentive Program and other CMS quality programs. Other commenters expressed the difficult burden for specialists and others who may not be able to identify sufficient CQMs related to their patient population. Still other comments suggested that providers could easily implement double the number of proposed CDS interventions.

Response: Overall comments were supportive of the proposed number of CDS interventions and of aligning these interventions with CQM reporting. If none of the clinical quality measures are applicable to an EP's scope of practice, the EP should implement a clinical decision support intervention that he or she believes will be effective in improving the quality, safety or efficiency of patient care. We believe that the proposed clinical quality measures for eligible hospitals and CAHs would provide ample opportunity for implementing clinical decision support interventions related to high-priority health conditions.

Comment: Commenters also supported continuing the requirement for providers to enable and implement drug-drug and drug-allergy interaction checks for the entire reporting period under the new CDS measure. An AHA Survey indicated that 73 percent of hospitals could perform the drug/drug and drug/allergy check, as well as at least one additional clinical decision support function in the Fall of 2011.

Response: We appreciate the commenters' overall support for consolidating this Stage 1 objective into one of the required clinical decision support measures. We also agree that drug-drug and drug-allergy interaction checks are important CDS tools contributing to improvements in patient safety and the overall quality of patient care.

Comment: Additional comments addressed concerns regarding the point at which professionals will be able to exercise clinical judgment about the CDS intervention before action is taken on behalf of the patient. The specific concern is that some interventions are only triggered when an action is about to be taken, and proposed that CMS revise this criterion to ''before or at the time an action is taken.''

Response: We agree with the commenter that providers should be allowed the flexibility to determine the most appropriate CDS intervention and timing of the CDS. The CDS measure for EPs, eligible hospitals and CAHs allows this flexibility by allowing the implementation at a ''relevant point in patient care.'' We clarify that the CDS implementation criterion which allow for CDS implementation at a relevant point in patient care includes interventions that may occur before or at the time an action is taken in the care delivery process.

Comment: Several commenters expressed concern with ''alert fatigue'' associated with increased use of clinical decision support interventions. These commenters cited studies that suggest

that multiple alerts may be disabled or ignored resulting in adverse effects in the quality of care and patient safety.

Response: We recognize that ''alert fatigue'' is a potential occurrence with the increased use of some types of clinical decision support interventions. However, meaningful use seeks to leverage the capabilities of CEHRT to improve patient care. The selection of CDS interventions should weigh both the potential for unintended consequences including alert fatigue against the benefits of each CDS intervention, and the appropriate selection of an intervention type that interferes minimally with the provider's clinical workflow and cognitive burden. We believe such determinations are best left to providers. CDS is included as a meaningful use objective because we believe that the overall benefit of CDS is to improve patient safety and the quality of care. Therefore, we will continue to require the implementation of clinical decision support interventions in order to achieve meaningful use. Finally, as defined in the ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register**, CDS is ''not simply an alert, notification, or explicit care suggestion.'' While some alerts may be helpful and necessary, we encourage EPs and hospitals to consider the selection of CDS interventions that are not alerts in order to reduce the burden of alert fatigue. Examples of non-alert CDS may include patient or disease specific order sets, referential decision support (presentation or availability of clinical reference information such as diagnostic guidance, dosing guidelines, or lab value interpretation assistance, or patient or disease specific documentation forms/templates that remind the provider to capture essential historical or physical exam findings for a patient with a certain condition). A common example of a CDS form/template would be a documentation form that is presented for patients with diabetes that includes a required section for the diabetic foot exam, where the same form would be presented for patients without diabetes and with the diabetic foot exam section removed.

Comment: Several commenters requested the flexibility to be able to change CDS interventions at any point during the reporting period so that in effect they would not be implementing the CDS intervention during the entire reporting period. Commenters cited provider uncertainty at the beginning of a reporting period of which CQMs they will ultimately report during the attestation process (for example, due to low counts for the measures). Many commenters requested the additional flexibility for providers to be permitted to implement CDS interventions relevant to any of the finalized panel of clinical quality measures specific to the provider type, even if the provider ultimately chooses different clinical quality measures to report. Commenters requested the opportunity to change CDS interventions during the reporting period and not be penalized for the CDS measure that requires the intervention during the entire reporting period. Commenters also wanted clarification whether they have to align CDS interventions with the same CQM measures reported for meaningful use.

Response: We expect providers to align CDS interventions with CQMs to the extent possible, although we recognize that providers may not know at the beginning of a reporting period which CQMs they will end up selecting to report. Based on the comments, we clarify that EPs and hospitals may implement CDS interventions that are related (as defined in the proposed rule) to any of the clinical quality measures for EPs and hospitals, respectively, and that are finalized for the EHR Incentive Program for the relevant year of reporting. In other words, providers are not required to implement CDS interventions that are related to the specific CQMs that they choose to report for that year. Providers who are not able to identify CQMs that apply to their scope of practice or patient population may implement CDS interventions that they believe are related to high-priority health conditions relevant to their patient population and will be effective in improving the quality, safety or efficiency of patient care. We will require providers to implement a minimum of five CDS interventions for the entire EHR reporting period. The provider may switch between CDS interventions or modify them during the EHR reporting period as long as a minimum of five are implemented for the entire EHR reporting period. We expect that providers may choose to implement a greater number of interventions from which they can select five interventions that have been enabled for the entire EHR reporting period when they attest to meaningful use.

Comment: Several providers recommend to be allowed to use their clinical judgment regarding which clinical decision support interventions would best benefit patients within the scope of their practice.

Response: We thank providers for this comment and want to clarify that in Stage 1; CMS allowed providers significant leeway in determining the clinical support interventions most relevant to their scope of practice. In Stage 2, we will continue to provide the flexibility for providers to identify high-priority health conditions that are most appropriate for CDS. As we stated in the proposed rule, for Stage 2 we will not require the provider to demonstrate actual improvements in performance on clinical quality measures for this objective. Because CQMs focus on high-priority health conditions by definition, to the extent possible, four of the five CDS interventions that are implemented must be related to CQMs. Providers are also reminded that the CDS interventions selected for Stage 2 represent only a floor. We expect that providers will implement many CDS interventions, and providers are free to choose interventions in any domain that is a priority to the EP, eligible hospital or CAH.

Comment: Several commenters voiced concern that CDS interventions must be predetermined at the beginning of an EHR reporting period but providers do not have to choose CQMs until the end of the attestation reporting period. There is concern that providers will be unable to change the CDS interventions if they decide to change the related CQMs in a reporting period.

Response: We proposed alignment with CQMs to facilitate provider reporting and measurement, but as we clarified earlier, providers are allowed the flexibility to implement CDS interventions that are related to any of the CQMs that are finalized for the EHR Incentive Program. They are not limited to the CQMs they choose to report. Providers who are not able to identify CQMs that apply to their scope of practice or patient population may implement CDS interventions that they believe are related to high-priority health conditions relevant to their patient population and will be effective in improving the quality, safety or efficiency of patient care. These high priority conditions must be determined prior to the start of the EHR reporting period in order to implement the appropriate CDS to allow for improved performance. We require a minimum number of CDS interventions, and providers must determine whether a greater number of CDS interventions are appropriate for their patient populations.

Comment: Commenters supported the inclusion of drug-drug and drug-allergy checks noting that they are critical to ensuring the safety of the medications prescribed for patients, and agree with the inclusion of this measure. Other commenters noted the lack of an for EPs

who do not prescribe medications and thus would not be able to meet this core set objective.

Response: We received similar feedback after publication of the Stage 1 final rule and after careful consideration of the comments, we will allow an exclusion to this measure for EPs that write fewer than 100 medication orders during the EHR reporting period. We did not include this exclusion as a change to Stage 1 as this is primarily an implementation of a function of CEHRT and there is no requirement to update CEHRT in 2013. This exclusion aligns with the exclusion under the objective CPOE for medication orders discussed earlier in this rule.

Comment: There were several comments regarding the implementation of CDS and the attributes required for each intervention. Commenters did not believe that the information requested in order to support the inclusion of CDS attributes would be available to many providers, particularly for providers in a group practice. Commenters also requested clarification whether these attributes would be required for drug-drug and drug-allergy interactions. Other commenters requested additional clarification regarding the extent that CDS attributes are required when the interventions result from self-generated evidence. Other comments addressed provider concerns regarding the need to purchase additional expensive vendor products and upgrades to incorporate these requirements.

Response: We appreciate the many comments for the proposed CDS attributes. We clarify that the need for inclusion of attributes for each CDS intervention also applies to drug-drug and drug-allergy interventions as well as interventions based on self-generated evidence. The companion ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register** further describes CEHRT requirements for these CDS attributes in order to ensure that all users of CEHRT will have access to this new functionality. After consideration of the public comments and for the reasons discussed earlier, we are modifying the measures for EPs at § 495.6(j)(6)(ii) and for eligible hospitals and CAHs at § 495.6(l)(5)(ii) as follows:

- Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an EP, eligible hospital or CAH's scope of practice or patient population, the clinical decision support interventions must be related to high-priority health conditions . It is suggested that one of the five clinical decision support interventions be related to improving healthcare efficiency.
- The EP, eligible hospital, or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.

Exclusion: For the second measure, any EP who writes fewer than 100 medication orders during the EHR reporting period.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(8) and (a)(2).

Replaced Objective: Provide patients with an electronic copy of their health information.

Replaced Objective: Provide patients with an electronic copy of their discharge instructions.

For Stage 2, we did not propose the Stage 1 meaningful use objectives for EPs and hospitals to provide patients with an electronic copy of their health information and discharge instructions upon request. As we stated in the proposed rule, the HIT Policy Committee recommended that these objectives be combined with the objectives for view online, download, and transmit. We agreed with the HIT Policy Committee and proposed to replace the Stage 1 objectives above with objectives and measures for Stage 2 that would enable patients to view online and download their health information and hospital admission information. We stated that continued online access to such information is more useful and provides greater accessibility over time and in different health care environments than a single electronic transmission or a one-time provision of an electronic copy, especially when that access is coupled with the ability to download a comprehensive point in time record.

We received no comments that supported the retention of these objectives for Stage 2. Therefore, we are finalizing the replacement of these objectives for EPs, eligible hospitals, and CAHs as proposed. Please refer to the discussions later in this rule regarding view online, download, and transmit objectives for both EPs and eligible hospitals and CAHs for more information about the Stage 2 objectives that replace these Stage 1 objectives.

Proposed EP Objective: Provide clinical summaries for patients for each office visit.

In the proposed rule, we outlined the following benefits of providing clinical summaries for patients for each office visit: A summary of an office visit provides patients and their families with a record of the visit. This record can prove to be a vital reference for the patient and their caregivers about their health and actions they should be taking to improve their health. Without this reference, the patient must either recall each detail of the visit, potentially missing vital information, or contact the provider after the visit. Certified EHR technology enables the provider to create a summary easily and in many cases instantly. This capability removes nearly all of the barriers that exist when using paper records.

As noted in the proposed rule, clinical summaries for each office visit are important because without this reference the patient must either recall each detail of the visit, potentially missing vital information, or contact the provider after the visit. We also noted that this is a meaningful use requirement, which does not override an individual's broader right under HIPAA to access his or her health information. Providers must continue to comply with all applicable requirements under the HIPAA Privacy Rule, including the access provisions of 45 CFR 164.524. However, none of the HIPAA access requirements preclude an EP from releasing electronic copies of clinical summaries to their patients as required by this meaningful use provision. For Stage 2, we proposed this as a core objective for EPs.

Comment: Some commenters believed that this objective should be eliminated because the same information would be made available through the objective to ''Provide patients the ability to view online, download, and transmit their health information.'' Other commenters suggested combining these objectives with a concomitant rise in the measure threshold.

Response: While it is true that there may be overlap between the information in the clinical summary and the information made available through the objective to ''Provide patients the ability to view online, download, and transmit their health information,'' we believe the clinical summary after an office visit serves a different purpose than online access to health information. A summary of an office visit provides patients and their families with a record of the visit and specific lab tests or specific follow-up actions and treatment related to the visit. While this information is certainly part of the patient's overall electronic health record, the clinical summary serves to highlight information that is relevant to the patient's care at that particular

moment. Therefore, we decline to eliminate or combine the objective.

After consideration of the public comments, we are finalizing the meaningful use objective for EPs at § 495.6(j)(11)(i) as proposed.

Proposed EP Measure: Clinical summaries provided to patients within 24 hours for more than 50 percent of office visits.

In the proposed rule, we proposed to maintain several policies regarding this objective from Stage 1. As we stated, for purposes of meaningful use, an EP could withhold information from the clinical summary if they believe substantial harm may arise from its disclosure through an after-visit clinical summary. An EP could also choose whether to offer the summary electronically or on paper by default, but at the patient's request must make the other form available. The EP could select any modality (for example, online, CD, USB) as their electronic option and would not have to accommodate requests for different modalities. We also stated in the proposed rule that we do not believe it would be appropriate for an EP to charge the patient a fee for providing the summary. Finally, we stated that when a single consolidated summary is provided for an office visit that lasts for several consecutive days, or for an office visit where a patient is seen by multiple EPs, that office visit must be counted only once in both the numerator and denominator of the measure. We are finalizing all of these policies for Stage 2 as proposed.

Comment: Many commenters suggested that the measure should be changed from ''24 hours'' to ''1 business day.'' Other commenters believed that this timeframe was too short, especially for specialty providers who might not come into the office every day, and suggested either changing the timeframe to 48 hours or reverting to the 72-hour measure of Stage 1. Another commenter noted that delays past 24 hours can sometimes occur outside of the provider's control—for example, in the case of new patients where the provider might not have access to adequate previous records.

Response: We believe that Certified EHR technology enables the provider to create a summary with the required information easily and in most cases instantly. The feedback we have received on this objective in Stage 1 through discussions with providers indicates that most providers make this clinical summary available as patients leave the office visit, and we expect this workflow to continue for most providers. Therefore a longer timeframe of 48 or 72 hours should not be necessary for providing clinical summaries. We also note that the clinical summary contains information relevant to the patient's office visit and therefore the EP should not need to include information from previous records for most patients. However, we believe the threshold of more than 50 percent of office visits allows EPs to meet the measure of this objective despite these challenges for a small number of patients. We also agree that the measure should be changed from ''24 hours'' to ''1 business day'' since all providers may not have staff available to issue clinical summaries prior to the close of a work week or the beginning of a Federal holiday. Therefore, we are finalizing the change from ''24 hours'' to ''1 business day.''

Comment: A number of commenters raised questions regarding the provision of the clinical summary. They asked whether the summary should be given automatically to each patient or whether offering the summary at the end of an office visit was sufficient to meet the measure. Commenters also asked whether patients who refused a copy of the clinical summary should be counted in the numerator of the measure.

Response: It is the intention of this objective that clinical summaries be automatically given to patients within 1 business day of an office visit. However, we do recognize that some patients may decline a physical copy of their clinical summary. In the event that a clinical summary is offered to and subsequently declined by the patient, that patient may still be included in the numerator of the measure. We note that the clinical summary must be offered to the patient; a passive indication of the clinical summary's availability (for example, a sign at the reception desk, a note in form, etc.) would not serve as offering the clinical summary and those patients could not be counted in the numerator of the measure. However, the clinical summary does not necessarily need to be printed before being offered to the patient.

Comment: Commenters asked whether making clinical summaries available on a patient portal or as part of the objective to ''Provide patients the ability to view online, download, and transmit their health information'' would meet the measure of this objective. Some commenters suggested that patients should be permitted to demand an electronic copy of clinical summaries where an EP has chosen to provide them in hard copy form.

Response: We are continuing our policy from Stage 1 that the clinical summary can be provided through a patient portal or through other electronic means to satisfy this measure. A clinical summary provided through the same means that the provider makes other patient information available to meet the objective to ''Provide patients the ability to view online, download, and transmit their health information'' would also meet the measure of this objective. As stated previously, an EP can choose whether to offer the summary electronically or on paper by default, but at the patient's request must make the other form available. The EP could select any modality (for example, online, CD, USB) as their electronic option and would not have to accommodate requests for different electronic modalities.

Comment: Some commenters suggested that this measure should be based on the number of unique patients seen by the EP instead of office visits. Other commenters suggested that the threshold for the measure should be reduced.

Response: We do not agree that the measure should be based on unique patients. The purpose of the clinical summary is to provide patients and their authorized representatives with a record of an office visit and specific lab tests or specific follow-up actions and treatment related to that visit. Nor do we agree that the percentage threshold of this measure should be reduced. We note that the threshold for this measure in Stage 1 was also 50 percent; any reduction would constitute a step backward for the meaningful use of this capability.

Comment: Some commenters suggested that EPs should be permitted to charge a fee for provision of a clinical summary.

Response: Because the clinical summary is meant to summarize the office visit and any lab tests, follow-up actions, or treatments related to that visit, we do not believe it is appropriate for an EP to charge patients additional fees for its provision. Also, because this is a meaningful use requirement for the incentivized provider and not a response to a patient request, we do not believe it is appropriate for an incentivized provider to charge the patient. This is consistent with our position for this objective in Stage 1 (75 FR 44358).

Comment: Commenters suggested that clinical summaries provided to patient-authorized representatives should also be counted for this measure.

Response: We agree that the provision of a clinical summary to a patient-authorized representative should also be counted, and we have amended the measure accordingly.

Comment: Many commenters believed that the list of required elements to be included in the clinical summary was excessive and not useful to the patient. Commenters suggested that the list be shortened or left to the provider's discretion. Additionally, many commenters asked for clarification on whether certain fields could be left blank and still permit the EP to meet the measure of this objective. Finally, a number of commenters suggested that this objective should focus on whether the summary is provided and not on required information since CEHRT cannot distinguish between information not provided in a clinical summary because it is not relevant or because a provider has exercised discretion to withhold it.

Response: This measure is focused on the provision of the clinical summary. The clinical summary represents a patient's current care and health as a snapshot in time. When provided, we believe it can significantly improve a patient's overall awareness of the care they are receiving as well as any conditions they may need to manage between office visits. The required information listed at the end of this section are provided as a way to standardize and prioritize for the purposes of EHR technology certification the minimum amount of information that must be available to EPs to select. Further, we believe that the information in this minimum list is the most applicable and beneficial to improving patient care. This is a list of information, not a particular structure or format for the summary handed to the patient.

We have no requirements on the design of the summary just the information that must be present if it is in the CEHRT. The design of the summary should reflect the context of the visit. For example, the information of future appointments, referrals to other providers, future scheduled tests, and clinical instructions could all appear in a section of the summary called ''Next steps''. If all of these information areas were empty then ''next steps'' could just be none and all the feeding information elements would be covered. Alternatively, if the summary is provided on letterhead that includes the office location and the provider's name that information does not have to be repeated in the text of the summary. We cannot emphasize enough that this is required information for the summary not a particular required structure for the summary. We do not believe that the list of required information imposes an undue burden on providers because CEHRT will be able to automatically generate the clinical summary with at least all of the required information. In ONC's rule it has included in the certification criterion that correlates to this objective the capability for end-users to customize (for example, edit) the clinical summary to make it more relevant to the patient encounter.

In circumstances where there is no information available to populate one or more of the fields previously listed, either because the EP can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, no medication allergies or laboratory tests), an indication that the information is not available in the clinical summary would meet the measure of this objective. The feedback we have received on this objective in Stage 1 through discussions with providers indicates that the absence of information in the clinical summary sometimes offers an opportunity for reconciliation of misinformation; for example, if ''no medication allergies'' is listed but the patient has one, he or she may communicate that to the provider, thus improving the quality of the data in the EHR. We do note that the measure of this objective already focuses on provision of the clinical summary and is not specific to the information which is provided within the clinical summary; the list of required elements is meant to standardize the information given to patients, not to create an additional measure for the objective.

We also refer providers to our discussion of what constitutes an office visit. Many of the concerns we have heard regarding this summary are the result of misunderstandings about what constitutes an office visit. For example, in some cases removing sutures or giving allergy shots do not represent an office visit if that is the only service provided.

Comment: Commenters asked for clarification on ''current problem list and any updates,'' ''current medication list and any updates,'' and ''current medication allergy list and any updates,'' since updates would be included in any current problem list. They suggested simplifying these requirements to ''current problem list;'' ''current medication list;'' and ''current medication allergy list''.

Response: We agree that including the language ''and any updates'' is redundant since a current problem, medication, or medication allergy list would already include updated information. We are amending this language in the list of required elements below. However, the clinical summary should include both a current problem list and any diagnosis specifically related to the office visit as separate fields. The diagnosis related to the office visit should be expressed in the ''Reason for the patient's visit'' field, though it may also be included in the current problem list. We note that this is consistent documentation available in the Consolidated Clinical Document Architecture (CDA), which defines the ''Reason for the patient's visit'' field as the provider's description of the reason for visit and the ''Chief complaint field'' as the patient's own description.

Comment: Commenters asked for clarification on ''vital signs and any updates'' and suggested simplifying this requirement to ''Vitals taken during visit''.

Response: While we agree that vital signs taken during the visit would be most useful in the clinical summary, we also recognize that all vital signs may not be updated at each office visit. Therefore, we are amending this language to ''Vital signs taken during the visit (or other recent vital signs)'' in the list of required elements below.

Comment: Commenters asked us to clarify if the requirement relating to the inclusion of laboratory test results applies only to test results available at the time of the office visit or to test results that become available after the clinical summary is issued.

Response: By laboratory test results, we mean for the clinical summary to include results that are available at the time the clinical summary is issued to the patient. As we stated in the proposed rule, clinical summaries can quickly become out of date due to information not available to the EP at the end of the visit. The most common example of this is laboratory test results. We believe that EPs should make this information known to the patient when the results are available, but do not require that a new clinical summary must be issued when information needs to be updated.

Comment: Commenters asked us to clarify if the list of diagnostic tests pending indicates diagnostic tests that have been scheduled or diagnostic tests for which results are not yet available.

Response: Diagnostic tests pending refers to diagnostic tests that have been performed but for which results are not yet available. Laboratory or diagnostic tests that have been scheduled but not yet performed should be recorded under ''Future scheduled tests'' in the list of required elements later in this section.

Comment: Some commenters asked us to define clinical instructions. Other commenters asked if the instructions included as part of the care plan were

redundant with the ''clinical instructions'' element in the list of required information.

Response: By clinical instructions we mean care instructions for the patient that are specific to the office visit. Although we recognize that these clinical instructions at times may be identical to the instructions included as part of the care plan, we also believe that care plans may include additional instructions that are meant to address long-term or chronic care issues, whereas clinical instructions specific to the office visit may be related to acute patient care issues. Therefore, we maintain these as separate items in the list of required elements later.

Comment: A commenter noted that future appointments and future scheduled tests might be stored in a scheduling system that is separate from CEHRT and suggested that if the information is not available in CEHRT that the EP be excluded from having to provide it as part of the clinical summary.

Response: As noted previously, in circumstances where there is no information available to populate one or more of the fields previously listed, either because the EP can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, no medication allergies or laboratory tests), an indication that the information is not available in the clinical summary would meet the measure of this objective. This would also be true if the information is not accessible through CEHRT.

Comment: Commenters asked for clarification regarding demographics ''maintained by EP.'' Specifically, they asked whether the EP was required to enter demographics or whether these could be maintained by a member of his or her staff.

Response: By demographics we mean the demographics maintained within CEHRT. We do not intend to specify that only the EP can enter such information into the EHR; demographic information can be entered into CEHRT by any person or through any electronic interface with another system. Therefore, we are amending the language to ''Demographic information maintained within CEHRT'' in our list of required elements later in this section.

Comment: In regard to the inclusion of ''care plan field'' in the list of required information, some commenters believed that the wording was overly prescriptive since CEHRT could utilize multiple fields to structure care plans. Other commenters requested a more detailed definition of care plan.

Response: We agree that the language proposed could be viewed as prescriptive, and we do not intend to limit the inclusion of the care plan to a single field. Therefore, we are amending the language to ''Care plan field(s), including goals and instructions'' in our list of required elements below. However, we decline to provide an alternate definition that would limit the information in the care plan. We believe that the definition we proposed in the proposed rule is sufficient to allow for the inclusion of a variety of care plans in the clinical summary. For purposes of the clinical summary, we define a care plan as the structure used to define the management actions for the various conditions, problems, or issues. A care plan must include at a minimum the following components: problem (the focus of the care plan), goal (the target outcome) and any instructions that the provider has given to the patient. A goal is a defined target or measure to be achieved in the process of patient care (an expected outcome).

Comment: Some commenters asked for clarification about what is meant by patient decision aids.

Response: By patient decision aids we mean any educational resource or tool that the provider believes can inform patient decisions about their own care. An example is an educational handout on the pros and cons of having surgery for a particular condition.

Comment: Some commenters noted that because EHRs capture medical data, they will produce clinical summaries with medical terminology, whereas patients should receive summaries with nonmedical terminology and descriptions of both medications and lab test results that are easy to read and contain actionable items.

Response: While we agree that clinical summaries with nonmedical terminology and extended descriptions would be most beneficial to patients, we also believe that the utility of this objective must be balanced against the potential burden it places on EPs. Since clinical summaries can be automatically generated from existing data in CEHRT, this removes significant workflow barriers to providing a summary for patients. We believe that requiring providers or their staff to render all information in the clinical summary into nonmedical terms at this time would impose a significant burden on providers and reduce the number of clinical summaries that providers make available to patients, thereby reducing the effectiveness of this objective. However, we note that most of the information that is required as part of the clinical summary should be easily understandable by most patients. Also, there is nothing to prevent an EP from providing additional information if he or she believes it would be more effective for the overall quality of patient care. We further note that we anticipate that the capabilities of CEHRT may soon allow for the provision of non-medical terminology and extended descriptions and we are considering adding this requirement in future stages of meaningful use.

Comment: One commenter noted that the clinical summary contains a vast amount of protected health information (PHI) which could be compromised if patients discard the clinical summary insecurely. The commenter suggested requiring the clinical summary only for those patients who affirm they want it to eliminate any provider responsibility for security of the information.

Response: We do not believe that making protected health information available to patients in any way compromises either patients or providers. On the contrary, we believe that offering this information is critical to improving the overall quality of patient care by offering specific follow-up instructions, test results, and care plan information to patients so that they can actively participate in their own care. We believe that providers can take steps to inform patients about the need to securely dispose of PHI, and we further note that making clinical summaries available electronically through an online portal or other means can be used to keep such PHI secure. Therefore, we decline to change the measure for this objective.

After consideration of the public comments, we are finalizing the meaningful use measure for EPs as ''Clinical summaries provided to patients or patient-authorized representatives within 1 business day for more than 50 percent of office visits'' at § 495.6(j)(11)(ii).

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(e)(2).

We clarify that the following information (or an indication that there is no information available) is required to be part of the clinical summary for Stage 2:

- Patient name.
- Provider's name and office contact information.
- Date and location of the visit.
- Reason for the office visit.
- Current problem list.
- Current medication list.
- Current medication allergy list.

- Procedures performed during the visit.
- Immunizations or medications administered during the visit.
- Vital signs taken during the visit (or other recent vital signs).
- Laboratory test results.
- List of diagnostic tests pending.
- Clinical instructions.
- Future appointments.
- Referrals to other providers.
- Future scheduled tests.
- Demographic information maintained within CEHRT (sex, race, ethnicity, date of birth, preferred language).
- Smoking status
- Care plan field(s), including goals and instructions.
- Recommended patient decision aids (if applicable to the visit).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of office visits conducted by the EP during the EHR reporting period.
- *Numerator:* Number of office visits in the denominator where the patient or a patient-authorized representative is provided a clinical summary of their visit within 1 business day.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP to meet this measure.
- *Exclusion:* Any EP who has no office visits during the EHR reporting period.

Removed Objective: Capability to exchange key clinical information.

In Stage 2, we proposed to move to actual use cases of electronic exchange of health information through the following objective: ''The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral.'' We also proposed to remove this objective for Stage 1 as well, but requested comments on other options. Please refer to the section titled ''Changes to Stage 1'' at II.A.3.b. of this final rule for details of the options considered. We are finalizing the removal of this objective as proposed in favor of the more robust, actual use case of electronic exchange through a summary of care record following each transition of care or referral. We believe that this actual use case is not only easier for providers to understand but it is also more beneficial because it contributes directly to the care of the patient through enhanced coordination between providers. A prudent provider will be preparing and testing to conduct actual exchange prior to the start of Stage 2 during their Stage 1 EHR reporting periods.

Proposed Objective: Protect electronic health information created or maintained by the CEHRT through the implementation of appropriate technical capabilities.

In the proposed rule, we outlined the following benefits of protecting health information: Protecting electronic health information is essential to all other aspects of meaningful use. Unintended and/or unlawful disclosures of personal health information could diminish consumers' confidence in EHRs and electronic health information exchange. Ensuring that health information is adequately protected and secured will assist in addressing the unique risks and challenges that may be presented by electronic health records.

Comment: A number of commenters supported the continued inclusion of this objective, yet several commenters requested the elimination of this objective as redundant to HIPAA regulations.

Response: We believe that it is crucial that EPs, eligible hospitals, and CAHs evaluate the privacy and security implications of CEHRT as part of the EHR Incentive Programs, particularly as they pertain to 45 CFR 164.308(a)(1) and the protection and safeguarding of personal health information in general. Therefore, we retain this objective and measure for meaningful use in the final rule.

After consideration of the public comments, we are finalizing the meaningful use objective for EPs at § 495.6(j)(16)(i) and eligible hospitals and CAHs at § 495.6(l)(15)(i) as proposed.

Proposed Measure: Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.

In the proposed rule, we explained that this measure is the same as in Stage 1 except that we specifically address the encryption/security of data is that is stored in CEHRT (data at rest). Due to the number of breaches reported to HHS involving lost or stolen devices, the HIT Policy Committee recommended specifically highlighting the importance of an entity's reviewing its encryption practices as part of its risk analysis. We agree that this is an area of security that appears to need specific focus. Recent HHS analysis of reported breaches indicates that almost 40 percent of large breaches involve lost or stolen devices. Had these devices been encrypted, their data would have been secured. It is for these reasons that we specifically call out this element of the requirements under 45 CFR 164.308(a)(1) for the meaningful use measure. We did not propose to change the HIPAA Security Rule requirements, or require any more than is required under HIPAA. We only emphasize the importance of an EP or hospital including in its security risk analysis an assessment of the reasonable and appropriateness of encrypting electronic protected health information as a means of securing it, and where it is not reasonable and appropriate, the adoption of an equivalent alternative measure.

We proposed this measure because the implementation of CEHRT has privacy and security implications under 45 CFR 164.308(a)(1). A review must be conducted for each EHR reporting period and any security updates and deficiencies that are identified should be included in the provider's risk management process and implemented or corrected as dictated by that process.

In the proposed rule, we emphasized that our discussion of this measure and 45 CFR 164.308(a)(1) is only relevant for purposes of the meaningful use requirements and is not intended to supersede what is separately required under HIPAA and other rulemaking. Compliance with the HIPAA requirements is outside of the scope of this rulemaking. Compliance with 42 CFR Part 2 and state mental health privacy and confidentiality laws is also outside the scope of this rulemaking. EPs, eligible hospitals or CAH affected by 42 CFR Part 2 should consult with the Substance Abuse and Mental Health Services Administration (SAMHSA) or state authorities.

Comment: Some commenters asked if the Stage 2 requirements for this objective contradict earlier Stage 1 requirements and HIPAA regulations. Specifically, the addition of addressing encryption/security of data at rest to the measure was raised as a concern.

Response: We do not believe that the Stage 2 measure of this objective contradicts either the Stage 1 measure or current HIPAA regulations. As noted in the proposed rule, this measure is the same as in Stage 1 except that we specifically highlight the encryption/security of data that is stored in CEHRT (data at rest). Recent HHS analysis of reported breaches indicates that almost 40 percent of large breaches (breaches affecting 500 or more individuals) involve lost or stolen devices. Had these

devices been encrypted, their data would have been secured. It is for these reasons that we specifically call out this requirement under 45 CFR 164.308(a)(1). We did not propose to change the HIPAA Security Rule requirements, or require any more under this measure than is required under HIPAA. We only emphasize the importance of an EP or hospital including in its security risk analysis an assessment of the reasonable and appropriateness of encrypting electronic protected health information as a means of securing it, and where it is not reasonable and appropriate, the adoption of an equivalent alternative measure.

Comment: Several commenters asked for clarification of what constitutes an acceptable security risk analysis. Commenters also asked if the security risk analysis required in the measure should apply to health data stored in data centers with physical security.

Response: We did not propose to change the HIPAA Security Rule requirements or impose additional requirements under this measure than those required under HIPAA. A review must be conducted for each EHR reporting period and any security updates and deficiencies that are identified should be included in the provider's risk management process and implemented or corrected as dictated by that process. We refer providers to the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), of the HIPAA Security Rule for compliance. The HHS Office for Civil Rights (OCR) has issued guidance on conducting a security risk assessment pursuant to the HIPAA Security Rule (*http://www.hhs.gov/ocr/privacy/hipaa/administrative/securityrule/rafinalguidancepdf.pdf*). The scope of the security risk analysis for purposes of this meaningful use measure applies only to data created or maintained by CEHRT. This measure does not apply to data centers that are not part of CEHRT. However, we note that such data centers may be subject to the security requirements under 45 CFR 164.308(a)(1) and refer providers to the HIPAA Security Rule for compliance information.

Comment: One commenter asked if the measure of the objective required hospitals to report on data encryption methods.

Response: No, eligible hospitals and CAHs are not required to report to CMS or the states on specific data encryption methods used. However, they are required to address the encryption/security of data at rest in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3).

Compliance with 42 CFR Part 2 and state mental health privacy and confidentiality laws is also outside the scope of this rulemaking. EPs, eligible hospitals or CAH affected by 42 CFR Part 2 should consult with the Substance Abuse and Mental Health Services Administration (SAMHSA) or state authorities.

We are making a change in this final rule to the language of ''data at rest'' to specify our intention of data that is stored in CEHRT. After consideration of the public comments, we are finalizing the meaningful use measure as ''Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in CEHRT in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process'' for EPs ''at § 495.6(j)(16)(ii) and eligible hospitals and CAHs at § 495.6(l)(15)(ii).

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(d)(1) through 170.314(d)(8).

(b) Objectives and Measures Carried Over (Modified or Unmodified) from Stage 1 Menu Set to Stage 2 Core Set

We signaled our intent in the Stage 1 final rule to move the objectives from the Stage 1 menu set to the Stage 2 core set. The HIT Policy Committee also recommended that we move all of these objectives to the core set for Stage 2. We proposed to include in the Stage 2 core set all of the objectives and associated measures from the Stage 1 menu set, except for the objective ''capability to submit electronic syndromic surveillance data to public health agencies'' for EPs, which will remain in the menu set for Stage 2. As discussed later, we also proposed to modify and combine some of these objectives and associated measures for Stage 2—

Consolidated Objective: Implement drug formulary checks.

For Stage 2, we proposed to include this objective within the core objective for EPs ''Generate and transmit permissible prescriptions electronically (eRx)'' and the menu objective for eligible hospitals and CAHs of ''Generate and transmit permissible discharge prescriptions electronically (eRx).'' We believe that drug formulary checks are most useful when performed in combination with e-prescribing, where such checks can allow the EP or hospital to increase the efficiency of care and benefit the patient financially. We address the comments related to these proposals and state our final policy in the discussions of the eRx objectives for EPs and hospitals.

Proposed Objective: Incorporate clinical lab test results into CEHRT as structured data.

We propose to continue the policy from Stage 1 to incorporate clinical lab test results into CEHRT as structured data. We believe this measure contributes to the exchange of health information between providers of care, facilitates the sharing of information with patients and their designated representatives, and may reduce order entry errors which will contribute to patient care improvements.

We did not receive any comments for this objective. We are finalizing the meaningful use objective for EPs at § 495.6(j)(7)(i) and eligible hospitals and CAHs at § 495.6(l)(6)(i) as proposed.

Proposed Measure: More than 55 percent of all clinical lab tests results ordered by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative or numerical format are incorporated in CEHRT as structured data.

We proposed to increase the measure threshold from more than 40 percent for Stage 1 to more than 55 percent for Stage 2. We also solicited public comment regarding the feasibility of continuing to account for individual lab tests separately from group and panel tests. In addition, we solicited comment on whether standards and other capabilities would allow for the expansion of this measure to include all quantitative lab results.

Comment: Many of the commenters voiced their concern that not all EHRs are capable of splitting out individual test results from panel tests and that it would not be feasible to require this for Stage 2 of meaningful use. Other commenters suggested modifying the current measure to use the number of laboratory test results in the EHR as the numerator and the total laboratory test results from the Lab Information System as the denominator. Others questioned the validity of the current measure that counts orders in the denominator and results in the numerator. Another comment is that not all providers have

access to a lab interface system and not all lab interfaces are compatible.

Response: We appreciate the many comments and suggestions submitted regarding this measure which were carefully considered as we developed the final regulation. Some commenters questioned the measure validity suggesting that the measure is imperfect since the numerator and denominator are incongruent. However, in considering the broader policy goal underlying this measure (to incorporate lab results into CEHRT in a standard format) the measure needs to be broad enough to allow providers to incorporate laboratory orders and results from multiple service providers. By incorporating all lab orders (whether panel or individual) in the denominator, and all lab test results in the numerator, providers will be able to capture structured lab data from a broad range of provider laboratory information systems into the CEHRT. We understand that the most likely scenario is that the denominator of total lab orders (if panel orders are counted as one) will be less than the numerator of laboratory results because results are provided for each individual test rather than by panel. Therefore, it is highly unlikely that the measure would impact a provider's ability to meet the increased threshold in this scenario.

Providers will need to continue to report individual lab test results recorded as structured data in the numerator, and in the denominator report all individual lab-tests ordered whether or not they are ordered individually or as part of a panel or group lab order. For example, one panel order of ten individual lab tests could be counted as 1 or 10 lab tests ordered in the denominator depending on the system that is used to incorporate this data into the CEHRT. We will monitor provider experience with this measure as technological capacity for the reporting and exchange of lab data continues to evolve.

Comment: Other commenters mentioned uncertainty regarding the proper vocabulary to use for the incorporation of lab test results in a structured format. Several commenters went on to mention that there is not one current vocabulary that encompasses all types of tests. Another comment proposed that CMS work to amend the clinical laboratory improvement amendments (CLIA) to require hospital labs to report results in standard vocabulary such as the Logical Observation Identifiers Names and Codes System (LOINC) by the time Stage 2 is implemented in 2014.

Response: We refer readers to the ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register** for vocabulary specifications.

Comment: Many commenters were confused by the clarification CMS provided in the proposed rule for expanding the measure to all quantitative results (all results that can be compared on as a ratio or on a difference scale). Comments were mixed on whether this measure should include all types of lab tests that produce quantitative results. One commenter suggested CMS should allow ordinal responses for the measure since that is what LOINC uses as the response rather than counting test results with either a positive, negative or numeric response since operationally, counting tests based on whether or not they have two allowed answer choices is difficult, where counting tests based on whether the LOINC code for them had a Scale of QN or Ord would be quite simple. Another commenter suggested most people would assume that ''numeric/quantitative tests'' would include decimals and whole numbers as well as results reported in a range (for example, >7.4 or <150) and ratios such as also titer levels (for example, 1:128).

Response: We appreciate the number of comments regarding an expansion of the existing measure as well as further clarification. Based on both CMS and companion ONC comments received, we clarify that the measure incorporate all numeric/quantitative tests that report whole or decimal numbers. The structured data for the numeric/quantitative test results may include positive or negative affirmations and/or numerical format that would include a reference range of numeric results and/or ratios.

Comment: Most commenters agreed that the increase measure threshold is appropriate. One commenter referenced a recent AHA survey that found ''60 percent of hospitals could perform this function in Fall 2011 at the raised threshold''.

Response: Our analysis of the Stage 1 attestation data shows that 91.5 percent of EPs and 95 percent of eligible hospitals and CAHs were able to successfully demonstrate meaningful use for this measure. Therefore, combined with the AHA survey data results, we will adopt the proposed threshold of 55 percent or more for this measure.

After consideration of the public comments received, we modify the measure for EPs at § 495.6(j)(7)(ii) and eligible hospitals and CAHs at § 495.6(l)(6)(ii) to:

More than 55 percent of all clinical lab tests results ordered by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative affirmation or numerical format are incorporated in CEHRT as structured data.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(5).

- *Denominator:* Number of lab tests ordered during the EHR reporting period by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) whose results are expressed in a positive or negative affirmation or as a number.
- *Numerator:* Number of lab test results which are expressed in a positive or negative affirmation or as a numeric result which are incorporated in CEHRT as structured data.
- *Threshold:* The resulting percentage must be more than 55 percent in order for an EP, eligible hospital, or CAH to meet this measure.
- *Exclusion:* Any EP who orders no lab tests where results are either in a positive/negative affirmation or numeric format during the EHR reporting period.

There is no exclusion available for eligible hospitals and CAHs because we do not believe any hospital will ever be in a situation where its authorized providers have not ordered any lab tests for admitted patients during an EHR reporting period.

Proposed Objective: Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

In the proposed rule, we outlined the following benefits of generating lists of patients by specific conditions: Generating patient lists is the first step in proactive management of populations with chronic conditions and is critical to providing accountable care. The ability to look at a provider's entire population or a subset of that population brings insight that is simply not available when looking at patients individually. Small variations that are unnoticeable or seem insignificant on an individual basis can be magnified when multiplied across a population. A number of studies have shown that significant improvements result merely due to provider awareness of population level information. We believe that many EPs and eligible hospitals will use these reports in combination with one of the

selected quality measures and decision support interventions to improve quality for a high priority issue (for example, identify patients who are in the denominator for a measure, but not the numerator, and in need of an intervention). The capabilities and variables used to generate the lists are defined in the ONC standards and certification final rule published elsewhere in this issue of the **Federal Register**; not all capabilities and variables must be used for every list.

We have combined the comments and responses for this objective with the measure below. After consideration of the public comments, we are finalizing the meaningful use objective for EPs at § 495.6(j)(8)(i) and eligible hospitals and CAHs at § 495.6(l)(7)(i) as proposed.

Proposed Measure: Generate at least one report listing patients of the EP, eligible hospital, or CAH with a specific condition.

We proposed to continue our Stage 1 policies for this measure. The objective and measure do not dictate the specific report(s) that must be generated, as the EP, eligible hospital, or CAH is best positioned to determine which reports are most useful to their care efforts. The report used to meet the measure can cover every patient or a subset of patients. We believe there is no EP, eligible hospital, or CAH that could not benefit their patient population or a subset of their patient population by using such a report to identify opportunities for quality improvement, reductions in disparities of patient care, or for purposes of research or patient outreach; therefore, we did not propose an exclusion for this measure. The report can be generated by anyone who is on the EP's or hospital's staff during the EHR reporting period. We also solicited comment on whether a measure that either increases the number and/or frequency of the patient lists will further the intent of this objective.

Comment: Most commenters voiced support for the objective and measure and wish it to remain unchanged in the final rule, although some commenters stated that the measure should only require demonstration that a list can be created and not require a certain number of patient lists until the needs to create certain patient lists are better ascertained.

Response: We appreciate the support for this objective, and we note that the measure of the objective remains unchanged from Stage 1. Demonstration only of the capability to generate lists of patients by specific conditions would represent a step backward from the Stage 1 measure, therefore we do not agree that this would be an appropriate measure for Stage 2. We also believe there is ample evidence to support the use of patient lists in a variety of quality improvement efforts.

Comment: Some commenters suggested that the measure requirements should be increased, either to require more than one report be generated during the EHR reporting period or to require that the report generated is linked to one of the EP's or eligible hospital's clinical decision support interventions. Another commenter suggested that the measure should indicate how the list should be used.

Response: We believe that moving the objective from the menu set to the core represents an adequate increase for Stage 2. We also continue to believe that an EP, eligible hospital, or CAH is best positioned to determine which reports are most useful to their care efforts. Therefore, we do not propose to direct certain reports be created or link reports to clinical decision support interventions at this time.

Comment: Some commenters suggested that lists should be generated according to specific clinical conditions or include specific elements, such as demographics, to aid analysis. One commenter wanted to know whether EPs retain flexibility in deciding the lists they generate, particularly in coordinating public health activities with state and local public health departments and Medicaid agencies. Another commenter suggested that the measure of the objective specify the continuous use of the report throughout the EHR reporting period.

Response: As noted previously, we are continuing our policy from Stage 1 that an EP, eligible hospital, or CAH is best positioned to determine which reports are most useful to their care efforts. Therefore, we do not propose to direct certain reports be created, nor do we require that specific conditions or elements be required for the reports. Also, we do not set requirements for the frequency of use of the report.

Comment: A commenter asked us to clarify whether the EP must generate the patient list or if the patient list could be generated by a member of the EP's staff in order to meet the measure.

Response: For this and most meaningful use objectives, we do not specify how information must be entered into CEHRT or who must complete the required action to meet the measure. Therefore an EP or a member of the EP's staff could generate the list and meet this measure. The exception to this rule is for computerized provider order entry (CPOE) of medication, laboratory, and radiology orders, which must be entered by a licensed healthcare professional per state, local, and professional guidelines.

After consideration of the public comments, we are finalizing the meaningful use measure for EPs at § 495.6(j)(8)(ii) and eligible hospitals and CAHs at § 495.6(l)(7)(ii) as proposed.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(14).

Proposed EP Objective: Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care.

In the proposed rule, we described the following benefits of this objective. By proactively reminding patients of preventive and follow-up care needs, EPs can increase compliance. These reminders are especially beneficial when long time lapses may occur as with some preventive care measures and when symptoms subside, but additional follow-up care is still required.

We also proposed to revise this objective for Stage 2 to ''Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care'' based on the HITPC recommendation. An EP should use clinically relevant information stored within the CEHRT to identify patients who should receive reminders. We believe that the EP is best positioned to decide which information is clinically relevant for this purpose.

Comment: A commenter stated that the language in the proposed objective is in conflict with the proposed measure. The proposed objective is to ''Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up,'' with no indication that the reminder be sent. However, the proposed measure refers to ''patient who had an office visit and were sent a reminder, per patient preference.''

Response: We agree with the commenter that the objective as proposed only speaks to the identification of the need for the reminder and that the proposed measure requires that the reminder be sent. The value of this objective is created when the reminder is sent to the patient and therefore, we revise the objective accordingly.

Comment: Commenters requested request clarification of the operative definition of ''reminder.'' Remembering to keep the appointment is an important first step to follow-up and preventive care and therefore should be counted.

Response: We believe that reminders should be limited to new actions that need to be taken not of actions that are already taken. For example, a reminder to schedule your next mammogram is a reminder to take action, while a reminder that your next mammogram is scheduled for next week is a reminder of action already taken. If we were to allow for reminders of existing scheduled appointments then every provider could meet this objective and measure without any patient ever learning new information. So we clarify that reminders for preventive/follow-up care should be for care that the patient is not already scheduled to receive. Reminders are not necessarily just to follow up with the reminding EP. Reminders for referrals or to engage in certain activities are also included in this objective and measure.

After consideration of the public comments received, we are modifying the objective at § 495.6(j)(9)(i) to ''Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care and send these patients the reminders, per patient preference.''

Proposed EP Measure: More than 10 percent of all unique patients who have had an office visit with the EP within the 24 months prior to the beginning of the EHR reporting period were sent a reminder, per patient preference.

In Stage 1, the measure of this objective was limited to more than 20 percent of all patients 65 years old or older or 5 years old or younger. Rather than raise the threshold for this measure, the HIT Policy Committee recommended lowering the threshold but extending the measure to all active patients. We proposed to apply the measure of this objective to all unique patients who have had an office visit with the EP within the 24 months prior to the beginning of the EHR reporting period. We believe this not only identifies the population most likely to consist of active patients, but also allows the EP flexibility to identify patients within that population who can benefit most from reminders. We solicited comments on the appropriateness of this timeframe. We also recognize that some EPs may not conduct face-to-face encounters with patients but still provide treatment to patients. These EPs could be unintentionally prevented from meeting this core objective under the measure requirements, so we proposed an exclusion for EPs who have no office visits in order to accommodate such EPs. Patient preference refers to the method of providing the reminder.

Comment: Commenters expressed concern that even with the proposed revisions many patients in the denominator might not require a reminder. One example given was some colonoscopies are done on a schedule of once every ten years. Another example provided was specialists who see some patients only for one-time consults. Suggestions by commenters to deal with patients in the denominator who do not require reminders involve either much more precise measurement such as tracking and following up when CEHRT identifies the need for a patient reminder, to specific exclusions of certain visit types in the measure or to move the requirement to the menu set. Others suggested that providers who do not typically send reminders be sent granted exclusions.

Response: We agree that not every active patient will require a reminder during the EHR reporting period, which is why the threshold is far below 100 percent. We believe that a low threshold of 10 percent is the best way to account for the contextually specific reasons a patient might not be sent a reminder. We proposed an exclusion for EPs who would typically not send reminders, specifically those without office-based visits. This may not include all providers who do not typically send reminders, but as an exclusion must contain definitive criteria we believe it is a good exclusion. We did not receive in comments precise criteria for an alternative exclusion.

Comment: We received many comments as to what constitutes an active patient in a practice. Many voiced the opinion that given the 24 month look back period in a typical practice, many patients would have moved to another practice. One suggestion given for an alternate way to count patients was to change the definition of ''active patients'' to be either three or more visits in 24 months or two or more visits in 12 months. Other commenters recommended that the time limitation be removed.

Response: We proposed active patients as a method to limit the denominator to patients more likely to require a reminder. The goal is to limit the denominator as much as possible without excluding patients who should receive a reminder. After reviewing the comments, we change the look back to patients with at least two office visits in the last 24 months. We believe this better establishes a relationship between the provider and the EP. This would account for those specialists that do not have continuing relationships with their patients, but rather hand their care back to the referring provider.

Comment: Several commenters raised concerns with the requirement that it be per patient preference. They asked for clarification on the definition of ''per patient preference.'' Specifically commenters asked if patient preference referred to whether the patient wanted reminders or what method of communication they wanted to receive the reminders. Second, clarification is requested on how providers should document these preferences. Third, there is concern that an insufficient number of patients will have their preferences recorded at the start of the EHR reporting period and if so, any method of communication should suffice for those patients.

Response: We clarify that patient preference is the method of communication that patients prefer to receive their reminders such as (but not limited to) by mail, by phone or by secure messaging. Given the look back period associated with this measure, we agree that it is not feasible to have all patient preferences recorded prior to the start of the EHR reporting period. Therefore, we clarify that reminders must be sent using the preferred communication medium only when it is known by the provider. This is limited to the type of communication (phone, mail, secure messaging, etc.) and does not extend to other constraints like time of day. Patients may decline to provide their preferred communication medium in which case the provider may select the communication medium. A patient may also decline to receive reminders. We believe that this will be rare enough that combined with the 10 percent through, patients declining to receive reminders will not affect the ability of an EP to meet this measure. It is our expectation that providers will begin to collect this information and that in the future as the look back period catches up to the publication of this final rule it will become possible to require that all reminders be sent per patient preference. We do not specify how things are documented beyond the capabilities and standards included in CEHRT.

After consideration of the public comments received, we are modifying the measure at § 495.6(j)(9)(ii) to ''More than 10 percent of all unique patients who have had 2 or more office visits with the EP within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference when available.''

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(14).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients who have had two or more office visits with the EP in the 24 months prior to the beginning of the EHR reporting period.
- *Numerator:* Number of patients in the denominator who were sent a reminder per patient preference when available during the EHR reporting period.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an EP to meet this measure.
- *Exclusion:* Any EP who has had no office visits in the 24 months before the EHR reporting period.

Proposed EP Objective: Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.

In the proposed rule, we stated that the goal of this objective was to allow patients easy access to their health information as soon as possible so that they can make informed decisions regarding their care or share their most recent clinical information with other health care providers and personal caregivers as they see fit. In addition, we noted that this objective aligns with the Fair Information Practice Principles (FIPPs),[3] in affording baseline privacy protections to individuals.[4] In particular, the principles include Individual Access (patients should be provided with a simple and timely means to access and obtain their individually identifiable information in a readable form and format). We indicated that this objective replaces the Stage 1 core objective for EPs of ''Provide patients with an electronic copy of their health information (including diagnostic test results, problem list, medication lists, medication allergies) upon request'' and the Stage 1 menu objective for EPs of ''Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within 4 business days of the information being available to the EP.'' The HIT Policy Committee recommended making this a core objective for Stage 2 for EPs, and we agreed with their recommendation consistent with our policy of moving Stage 1 menu objectives to the core set for Stage 2. Consistent with the Stage 1 requirements, we noted that the patient must be able to access this information on demand, such as through a patient portal or personal health record (PHR). However, we noted that providers should be aware that while meaningful use is limited to the capabilities of CEHRT to provide online access there may be patients who cannot access their EHRs electronically because of their disability. Additionally, other health information may not be accessible. Finally, we noted that providers who are covered by civil rights laws must provide individuals with disabilities equal access to information and appropriate auxiliary aids and services as provided in the applicable statutes and regulations.

Comment: Some commenters suggested that this objective should be part of the menu set instead of a core objective for Stage 2. This would permit EPs who do not believe they can meet the measure at this time to select different objectives.

Response: We do not agree that this objective should be part of the menu set. We proposed this objective as part of the core for EPs because it is intended to replace the previous Stage 1 core objective of ''Provide patients with an electronic copy of their health information upon request'' and the Stage 1 menu objective of ''Provide patients with timely electronic access to their health information.'' Although CEHRT will provide added capabilities for this objective, we do not believe the objective itself is sufficiently different from previous objectives to justify placing it in the menu set. Also, we believe that patient access to their electronic health information is a high priority for the EHR Incentive Programs and this objective best provides that access in a timely manner.

Comment: Some commenters expressed the opinion that this objective should not be included as part of meaningful use and was more appropriately regulated under HIPAA and through the Office for Civil Rights.

Response: We do not agree that this objective should not be included in meaningful use. Although we recognize that many issues concerning the privacy and security of electronic health information are subject to HIPAA requirements, we believe that establishing an objective to provide online access to health information is within the regulatory purview of the EHR Incentive Programs and consistent with the statutory requirements of meaningful use.

Comment: Some commenters suggested that this objective should be combined with the objective to ''Provide clinical summaries for patients after each office visit'' since much of the information provided in these objectives is identical.

Response: While it is true that there may be overlap between the information provided in the clinical summary and the information made available through this objective, we believe the clinical summary after an office visit serves a different purpose than online access to health information. A summary of an office visit provides patients and their families with a record of the visit and specific lab tests or specific follow-up actions and treatment related to the visit. While this information is certainly part of the patient's overall electronic health record, the clinical summary serves to highlight information that is relevant to the patient's care at that particular moment. Therefore, we decline to combine the two objectives.

After consideration of the public comments, we are finalizing the meaningful use objective for EPs at § 495.6(j)(10)(i) as proposed.

Proposed EP Measures: We proposed two measures for this objective, both of which must be satisfied in order to meet the objective:

More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information.

More than 10 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download or transmit to a third party their health information.

Exclusions: Any EP who neither orders nor creates any of the information listed for inclusion as part of this measure may exclude both

[3] In 1973, the Department of Health, Education, and Welfare (HEW) released its report, *Records, Computers, and the Rights of Citizens,* which outlined a Code of Fair Information Practices that will create ''safeguard requirements'' for certain ''automated personal data systems'' maintained by the Federal Government. This Code of Fair Information Practices is now commonly referred to as fair information practice principles (FIPPs) and established the framework on which much privacy policy will be built. There are many versions of the FIPPs; the principles described here are discussed in more detail in *The Nationwide Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information,* December 15, 2008. *http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_privacy_security_framework/1173.*

[4] The FIPPs, developed in the United States nearly 40 years ago, are well-established and have been incorporated into both the privacy laws of many states with regard to government-held records and numerous international frameworks, including the development of the OECD's privacy guidelines, the European Union Data Protection Directive, and the Asia-Pacific Economic Cooperation (APEC) Privacy Framework.*http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_privacy_security_framework/1173.*

measures. Any EP that conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 4Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period may exclude only the second measure.

As we stated in the proposed rule, transmission can be any means of electronic transmission according to any transport standard(s) (SMTP, FTP, REST, SOAP, etc.). However, the relocation of physical electronic media (for example, USB, CD) does not qualify as transmission although the movement of the information from online to the physical electronic media will be a download.

Comment: Some commenters suggested that the timeframe for the first measure should be expanded to 7 days, since the data required to be provided in order to meet the measure of this objective would sometimes be incomplete only 4 days after the patient's visit. Other commenters suggested the timeline for the first measure should be shortened to 2 business days or 24 hours.

Response: We do not agree that the timeframe for the measure should be lengthened. In the Stage 1 menu objective of ''Provide patients with timely electronic access to their health information,'' we established the measure for providing access within 4 business days. Also, we believe that most of the information required by this measure, except for lab tests, will be readily available within the specified time period. However, we also believe that 24 hours or 2 business days would not provide adequate time to make all information available online. Therefore, we maintain the requirement of making information available within 4 business days.

Comment: Some commenters asked for clarification on whether online access had to be made available using CEHRT or if the information could be made available through other means (patient portal, PHR, etc.).

Response: Both of the measures for this objective must be met using CEHRT. Therefore, for the purposes of meeting this objective, the capabilities provided by a patient portal, PHR, or any other means of online access and that would permit a patient or authorized representative to view, download, or transmit their personal health information would have to be certified in accordance with the certification requirements adopted by ONC. We refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register**.

Comment: A commenter asked how long data should be made available online before it can be removed. In a related topic, another commenter asked which provider would be responsible for excluding data from sharing when multiple providers share CEHRT.

Response: It is the goal of this objective to make available to the patient both current and historical health information. Therefore, we would anticipate that the data should be available online on an ongoing basis. However, an EP may withhold or remove information from online access if they believe substantial harm may arise from its disclosure online. In regard to withholding data and which provider should be responsible for making the determination when multiple providers share CEHRT, we would expect that providers sharing the CEHRT would make a joint determination regarding the information to be withheld. Therefore, we leave this decision to the providers' discretion.

Comment: Some commenters asked for clarification on how access by the patient is defined.

Response: We define access as having been given when the patient possesses all of the necessary information needed to view, download, or transmit their information. This could include providing patients with instructions on how to access their health information, the Web site address they must visit for online access, a unique and registered username or password, instructions on how to create a login, or any other instructions, tools, or materials that patients need in order to view, download, or transmit their information.

Comment: Some commenters suggested that patients under the age of 18 should not have the same access to the same information to which adult patients have access and requested a separate list of required elements for patients under the age of 18.

Response: An EP may decide that online access is not the appropriate forum for certain health information for patients under the age of 18. Within the confines of the laws governing guardian access to medical records for patients under the age of 18, we would defer to the EP's judgment regarding which information should be withheld for such patients. In lieu of providing online access to patients under the age of 18, EPs could provide online access to guardians for patients under the age of 18, in accordance with state and local laws, in order to meet the measure of this objective. Providing online access to guardians in accordance to state and local laws would be treated the same as access for patients, and guardians could then be counted in the numerator of the measure. We recognize that state and local laws may restrict the information that can be made available to guardians, and in these cases such information can be withheld and the patient could still be counted in the numerator of the measure. No requirement of meaningful use supersedes any Federal, State or local law regarding the privacy of a person's health information.

Comment: Some commenters suggested that specialists should transmit information to the patient's primary care provider rather than providing online access to information in order to reduce the number of portals a patient must visit, which could cause confusion.

Response: We believe that much of this information will be transmitted between providers as part of the summary of care record following a transition of care. However, we also believe there is value to the patient in having online access to this information for all providers they visit, including specialists. Therefore, we maintain this measure for all EPs.

Comment: Many commenters voiced objections to the second measure of this objective and the concept of providers being held accountable for patient actions. The commenters believed that while providers could be held accountable for making information available online to patients, providers could not control whether patients actually accessed their information. Many commenters also noted that the potential barriers of limited internet access, computer access, and patient engagement with health IT for certain populations (for example, rural, elderly, lower income, visually impaired, non-English-speaking, etc.) might make the measure impossible to meet for some providers. There were also a number of comments stating that metrics used to track views or downloads can be misleading and are not necessarily the most accurate measure of patient usage. Commenters suggested a number of possible solutions to allow providers to overcome these barriers, including eliminating the percentage threshold of the measure or requiring providers to offer and track patient access but not requiring them to meet a percentage measure in order to demonstrate meaningful use. However, some commenters believed that the measure was a reasonable and necessary step to ensure that providers had accountability for engagement of their patients in use of electronic health information and integration of it into clinical practice. In

addition, commenters pointed to the unique role that providers can play in encouraging and facilitating their patients' and their families' use of online tools.

Response: While we recognize that EPs cannot directly control whether patients access their health information online, we continue to believe that EPs are in a unique position to strongly influence the technologies patients use to improve their own care, including viewing, downloading, and transmitting their health information online. We believe that EPs' ability to influence patients coupled with the low threshold of more than 10 percent of patients having viewed online, downloaded, or transmitted to a third party the patient's health information make this measure achievable for all EPs.

We recognize that certain patient populations face greater challenges in online access to health information. We address the potential barrier of limited Internet access in the comment regarding a broadband exclusion below. We address the potential barrier to individuals with disabilities through ONC's rules requiring that EHRs meet web content accessibility standards. While we agree that excluding certain patient populations from this requirement would make the measure easier for EPs to achieve, we do not know of any reliable method to quantify these populations for each EP in such a way that we could standardize exclusions for each population. We also decline to eliminate the percentage threshold of this measure because we do not believe that a simple yes/no attestation for this objective is adequate to encourage a minimum level of patient usage. However, in considering the potential barriers faced by these patient populations, we agree that it would be appropriate to lower the proposed threshold of this measure to more than 5 percent of unique patients who view online, download, or transmit to a third party the patient's health information. In addition, we are concerned that blanket exclusions for certain disadvantaged populations could serve to extend existing disparities in electronic access to health information and violate civil rights laws. All entities receiving funds under this program are subject to civil rights laws. For more information about these laws and their requirements (see *http://www.hhs.gov/ocr/civilrights/index.html*). We believe that this lower threshold, combined with the broadband exclusion detailed in the response that follow, will allow all EPs to meet the measure of this objective.

Comment: Some commenters suggested an alternate definition of the second measure based on the number of patients seen within the last 2 years that access their health information online.

Response: We believe that the current numerator and denominator for this measure encourage the active online access by patients of their health information. We further believe that broadening the time period of this measure to patients seen within the last 2 years does not encourage both EPs and current patients to use online access to health information in the active management of their care, which is one of the goals of the EHR Incentive Programs. Therefore, we decline to adopt this suggested alternate definition.

Comment: Some commenters asked for clarification on how view is defined.

Response: We define view as the patient (or authorized representative) accessing their health information online.

Comment: Some commenters noted that the potential financial burden of implementing an online patient portal to provide patients online access to health information. These commenters noted the added time burden for staff in handling the additional patient use of online resources, which may increase costs through the hiring of additional staff, as well as the need to modify their existing workflow to accommodate additional online messages from patients. Some commenters also believed that there would be an additional cost for sharing content before standards exist for content types and formats.

Response: We do not believe that implementing online access for patients imposes a significant burden on providers. While we note that in some scenarios it may be possible for an EP to receive reimbursement from private insurance payers for online messaging, we acknowledge that EPs are generally not reimbursed for time spent responding to electronic messaging. However, it is also true that EPs are generally not reimbursed for other widely used methods of communication with patients (for example, telephone). As we noted in the proposed rule, many providers have seen a reduction in time responding to inquires and less time spent on the phone through the use of health IT, including online messages from patients. We expect the same will be true for online access to health information by reducing continuous requests for health records, test results, and other pertinent patient information. Finally, we believe that the standards established for this objective by ONC will serve as a content standard that will allow this information to be more easily transmitted and uploaded to another certified EHR, thereby reducing additional costs.

Comment: Some commenters noted that patient engagement could occur effectively with or without online access, and patients should be encouraged to use any method (for example, telephone, internet, traditional mail) that suits them. These commenters noted that engagement offline reduces both the need and value for engagement online.

Response: We agree that patient engagement can occur effectively through a variety of media, and we also believe that electronic access to health information can be an important component of patient engagement. We do not believe that offline engagement reduces the need for online access, as patients may opt to access information in a variety of ways. Because of the variety of ways that patients/families may access information, we keep the threshold for this measure low. We also note that online access to health information can enhance offline engagement—for example, patients could download information from an office visit with their primary care provider to bring with them for a consult with a specialist—which is one of the primary goals of the EHR Incentive Programs.

Comment: Some commenters expressed concern that vendors would not be able to make these capabilities available as part of CEHRT in time for the beginning of Stage 2.

Response: Many CEHRT vendors already make patient portals available that would meet the certification criteria and standards required for this measure. In fact, many vendors have already incorporated these capabilities into their CEHRT products in order to meet the measure of the Stage 1 objective to ''Provide patients with timely electronic access to their health information.'' Although the Stage 2 measure requires some additional capabilities, we believe vendors will be able to make these capabilities available in time for the beginning of Stage 2.

Comment: Some commenters requested clarification on the exclusion regarding an EP ''who neither orders nor creates any of the information listed for inclusion as part of this measure may exclude both measures.'' Because the list of required elements for this measure includes the patient's name, provider's name, and office contact information, these commenters suggested that no EP could qualify for this exclusion.

Response: We amend the wording of the exclusion to accommodate providers who do not order or create any of the information listed, except for patient name, provider name, and office contact information.

Comment: Some commenters suggested that basing an exclusion on the broadband data available from the FCC Web site (*www.broadband.gov*) was suspect since the data originates from vendors.

Response: The broadband data made available from the FCC was collected from over 3,400 broadband providers nationwide. This data was then subject to many different types of analysis and verification methods, from drive testing wireless broadband service across their highways to meeting with community leaders to receive feedback. Representatives met with broadband providers, large and small, to confirm data, or suggest changes to service areas, and also went into the field looking for infrastructure to validate service offerings in areas where more information was needed. Therefore, we believe the data is appropriate for the exclusion to this measure. We note that since publication of our proposed rule the Web site has changed to *www.broadbandmap.gov* and the speed used has changed from 4Mbps to 3Mbps. We are updating our exclusion to reflect these changes.

Comment: Some commenters believe that broadband exclusions should be based on the patients' locations instead of the providers, since county-level data may not be granular enough to capture all areas of low broadband availability within a particular region.

Response: Although we agree that a broadband exclusion based primarily on the individual locations of each patient seen would be more accurate, we do not believe that there is any method of making this determination for every patient without placing an undue burden on the provider. We continue to believe that limited broadband availability in the EP's immediate practice area, coupled with the low threshold of this measure, adequately serves as an acceptable proxy for determining areas where online access can present a challenge for patients. Therefore, we retain the broadband exclusion as proposed.

Comment: Some commenters requested a clarification of the required element of ''Any additional known care team members beyond the referring or transitioning provider and the receiving provider.''

Response: With this element we mean for providers to indicate the names and contact information for any other health care professionals known to the EP. This could include referring providers, receiving providers, or any other provider inside or outside the EP's practice that provides care to the patient. We are amending the language for this required element to ''Any known care team members.''

Comment: Some commenters suggested that growth charts should not be included for either download or transmission, since these charts are simply visualizations of the height and weight data elements.

Response: We believe that growth charts can be a useful tool for both patients and providers, especially in instances where a patient may elect to download or transmit their health information to another provider. Therefore, we require them to be included to meet the measure of this objective.

Comment: One commenter suggested that images should not be included in the list of required elements to be provided to patients online. They cited specific difficulties in image viewing online, as well as concerns over file size.

Response: We note the commenter's concerns and further note that images are not among the required elements to meet the measure of this objective.

After consideration of the public comments, we finalize the first meaningful use measure for EPs as proposed at § 495.6(j)(10)(ii)(A). We finalize the second meaningful use measure for EPs as ''More than 5 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download or transmit to a third party their health information'' at § 495.6(j)(10)(ii)(B). We finalize the following exclusions for EPs at § 495.6(j)(10)(iii): ''Any EP who neither orders nor creates any of the information listed for inclusion as part of both measures, except for ''Patient name'' and ''Provider's name and office contact information,'' may exclude both measures;'' ''Any EP that conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period may exclude only the second measure''.

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(e)(1).

To calculate the percentage of the first measure for providing patient with timely online access to health information, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP during the EHR reporting period.
- *Numerator:* The number of patients in the denominator who have timely (within 4 business days after the information is available to the EP) online access to their health information.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP to meet this measure.

For the second measure for reporting on the number of unique patients seen by the EP during the EHR reporting period (or their authorized representatives) who view, download or transmit health information, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP during the EHR reporting period.
- *Numerator:* The number of unique patients (or their authorized representatives) in the denominator who have viewed online, downloaded, or transmitted to a third party the patient's health information.
- *Threshold:* The resulting percentage must be more than 5 percent in order for an EP to meet this measure.
- *Exclusions:* Any EP who neither orders nor creates any of the information listed for inclusion as part of both measures, except for ''Patient name'' and ''Provider's name and office contact information,'' may exclude both measures. Any EP that conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period may exclude only the second measure.

In order to meet this objective, the following information must be made available to patients electronically within 4 business days of the information being made available to the EP:

- Patient name.
- Provider's name and office contact information.
- Current and past problem list.
- Procedures.
- Laboratory test results.
- Current medication list and medication history.
- Current medication allergy list and medication allergy history.
- Vital signs (height, weight, blood pressure, BMI, growth charts).
- Smoking status.

• Demographic information (preferred language, sex, race, ethnicity, date of birth).

• Care plan field(s), including goals and instructions, and

• Any known care team members including the primary care provider (PCP) of record.

As we stated in the proposed rule, this is not intended to limit the information made available by the EP. An EP can make available additional information and still align with the objective. In circumstances where there is no information available to populate one or more of the fields previously listed, either because the EP can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, no medication allergies or laboratory tests), the EP may have an indication that the information is not available and still meet the objective and its associated measure. Please note that while some of the information made available through this measure is similar to the information made available in the summary of care document that must be provided following transitions of care or referrals, the list of information above is specific to the view online, download, and transmit objective. Patients and providers have different information needs and contexts, so CMS has established separate required fields for each of these objectives.

Proposed Objective: Use clinically relevant information from Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.

In the proposed rule, we explained that providing clinically relevant education resources to patients is a priority for the meaningful use of CEHRT. Based on our experience with this objective in Stage 1, we are clarifying that while CEHRT must be used to identify patient-specific education resources, these resources or materials do not have to be stored within or generated by the CEHRT. We are aware that there are many electronic resources available for patient education materials, such as through the National Library of Medicine, that can be queried via CEHRT (that is, specific patient characteristics are linked to specific consumer health content). The EP or hospital should utilize CEHRT in a manner where the technology suggests patient-specific educational resources based on the information stored in the CEHRT. Certified EHR technology is certified to use the patient's problem list, medication list, or laboratory test results to identify the patient-specific educational resources. The EP or hospital may use these elements or additional elements within CEHRT to identify educational resources specific to patients' needs. The EP or hospital can then provide these educational resources to patients in a useful format for the patient (such as, electronic copy, printed copy, electronic link to source materials, through a patient portal or PHR).

In the Stage 1 final rule (75 FR 44359), we included the phrase ''if appropriate'' in the objective so that the EP or the authorized provider in the hospital could determine whether the education resource was useful and relevant to a specific patient. Consistent with the recommendations of the HIT Policy Committee, we proposed to remove the phrase ''if appropriate'' from the objective for Stage 2 because we do not believe that any EP or hospital will have difficulty identifying appropriate patient-specific education resources for the low percentage of patients required by the measure of this objective.

We also recognized that providing education materials at literacy levels and cultural competency levels appropriate to patients is an important part of providing patient-specific education. However, we continue to believe that there is not currently widespread availability of such materials and that such materials could be difficult for EPs and hospitals to identify for their patients.

Comment: Many commenters sought clarification on the meaning of the term ''identified by CEHRT.'' They questioned how the CEHRT would identify resources and whether the education resources had to be stored in the CEHRT or if it could contain links to the materials.

Response: We clarified in the proposed rule (77 FR 13720) that while CEHRT must be used to identify patient-specific education resources, these resources or materials do not have to be stored within or generated by the Certified EHR Technology. We refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register** which describes the capabilities and standards that CEHRT must include. For patient-specific education materials, this includes a general functional capability to identify educational materials as well as a capability to do so using the HL7 Context-aware Information Retrieval ''Infobutton'' standard. This measure requires that an EP or hospital use the capabilities CEHRT includes to identify patient education materials. To clarify, although CEHRT will include the ability to identify education materials using the HL7 Infobutton standard, such capability alone does not need to be used in order to be counted in the numerator (that is, the general capability to identify education materials also counts towards the numerator).

After reviewing the public comments, we finalize the objective for EPs at § 495.6(j)(12)(i) and for eligible hospitals and CAHs at § 495.6(l)(9)(i) as proposed.

Proposed EP Measure: Patient-specific education resources identified by Certified EHR Technology are provided to patients for more than 10 percent of all office visits by the EP.

In the proposed rule, we noted that the Stage 1 measure for this objective for EPs was ''More than 10 percent of all unique patients seen by the EP are provided patient-specific education resources.'' Because we proposed this as a core objective for Stage 2, we proposed to modify the measure for EPs to ''Patient-specific education resources identified by CEHRT are provided to patients for more than 10 percent of all office visits by the EP.'' We recognized that some EPs may not conduct face-to-face encounters with patients but still provide treatment to patients. These EPs could be prevented from meeting this core objective under the previous measure requirements, so we proposed to alter the measure to account for office visits rather than unique patients seen by the EP. We also proposed an exclusion for EPs who have no office visits in order to accommodate such EPs.

The resources will have to be those identified by CEHRT. If resources are not identified by CEHRT and provided to the patient then it will not count in the numerator. We do not intend through this requirement to limit the education resources provided to patient to only those identified by CEHRT. We proposed the threshold at only 10 percent for this reason. We believe that the 10 percent threshold both ensures that providers are using CEHRT to identify patient-specific education resources and is low enough to not infringe on the provider's freedom to choose education resources and to which patients these resources will be provided. The education resources will need to be provided prior to the calculation and subsequent attestation to meaningful use.

Comment: Many commenters expressed concerns about the availability of resources that would be available at the appropriate literacy level for their patient populations. Some stated that there is a dearth of low-literacy materials available as most education sites are geared toward

college-educated patients; others stated that most materials are designed to be appropriate for a broad spectrum of literacy levels. Some commenters expressed concerns about the lack of resources available for non-English speaking patients. Yet other commenters were unclear as to what appropriate sources of patient-specific education would be. Some commenters expressed concerns that another alert within the system may create physician fatigue.

Response: We understand the commenters concerns that the educational materials identified by the CEHRT may not be appropriate for certain patients. To accommodate these concerns, we are maintaining the threshold for this measure at 10 percent. As we stated in our proposed rule and in the Stage 1 Final Rule, we account for these concerns by maintaining a low threshold for this objective.

Comment: Some commenters expressed concerns that the CEHRT, not the provider, would ''choose'' which educational resources would be provided to the patient.

Response: We cannot define the scope of practice and/or appropriate educational resources to be shared with each individual patient and will continue to rely on provider determinations based on individual patient circumstances.

Comment: Many commenters were concerned that the denominator for the EP measure included the number of office visits by the EP during the EHR reporting period. Commenters agreed with the rationale that EPs might not have the opportunity to provide educational materials to a patient if the patient has not had an office visit with the EP, however, commenters also stated that if an EP has a series of office visits with a patient, it might not be appropriate to provide education at each visit (for example, a patient with heart disease or high blood pressure that would see the EP multiple times during the EHR reporting period). To avoid the potential for presenting redundant information to patients, commenters suggested that the denominator be based on unique patients with office visits. This is consistent with the denominator for eligible hospitals, as that denominator is based on unique patients admitted. Additionally, commenters noted that counting unique patients is more appropriate to account for patient-specific education resources that are not provided in the context of an office visit, such as reference materials available from a portal or PHR about a patient's medications, conditions, or lab results.

Response: We agree with commenters in that counting unique patients with office visits during the EHR reporting period for EPs, rather than office visits, is a more appropriate denominator for this measure. A patient with a chronic disease, such as diabetes or heart disease, may have multiple office visits with an EP during the EHR reporting period. While providing educational resources for these patients is important, presenting the same materials each office visit may prove to be redundant. We encourage EPs to refer educational resources to their patients with multiple visits during the EHR reporting period at their discretion.

Additionally, we do maintain that EPs with no office visits during the EHR reporting period can be excluded from this measure. Therefore, we are finalizing the denominator for this measure as the ''Number of unique patients with office visits seen by the EP during the EHR reporting period.''

Comment: Most commenters agreed that 10 percent was a reasonable threshold for this measure as it was proposed.

Response: We agree with commenters and are finalizing 10 percent as the threshold for this measure. It will remain unchanged from Stage 1.

After reviewing the public comments, we are finalizing the measure for EPs at § 495.6(j)(12)(ii) as ''Patient-specific education resources identified by CEHRT are provided to patients for more than 10 percent of all unique patients with office visits seen by the EP during the EHR reporting period.''

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(15).

To calculate the percentage for EPs, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients with office visits seen by the EP during the EHR reporting period.
- *Numerator:* Number of patients in the denominator who were provided patient-specific education resources identified by the Certified EHR Technology.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an EP to meet this measure.
- *Exclusion:* Any EP who has no office visits during the EHR reporting period.

Proposed Eligible Hospital/CAH Measure: More than 10 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.

After consideration of public comments, we are finalizing the measure for eligible hospitals and CAHs at § 495.6(l)(9)(ii) as proposed.

We further specify that in order to meet this objective and measure, an eligible hospital or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(15).

To calculate the percentage for hospitals, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.
- *Numerator:* Number of patients in the denominator who are subsequently provided patient-specific education resources identified by CEHRT.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an eligible hospital or CAH to meet this measure.

Proposed Objective: The EP, eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.

In the proposed rule we outlined the following benefits of this objective. Medication reconciliation allows providers to confirm that the information they have on the patient's medication is accurate. This not only assists the provider in their direct patient care, it also improves the accuracy of information they provide to others through health information exchange.

In the proposed rule, we noted that that when conducting medication reconciliation during a transition of care, the EP, eligible hospital or CAH that receives the patient into their care should conduct the medication reconciliation. We reiterated that the measure of this objective does not dictate what information must be included in medication reconciliation. Information included in the process of medication reconciliation is appropriately determined by the provider and patient. In the proposed rule we defined medication reconciliation as the process of identifying the most accurate list of all medications that the patient is taking, including name, dosage, frequency, and route, by comparing the medical record to an external list of medications obtained from a patient, hospital or other provider. We proposed that the electronic exchange of information is

not a requirement for medication reconciliation.

Comment: Commenters requested that the definition of medication reconciliation should specifically mention over-the-counter medications, vitamins, herbal or other alternative care medications in the definition.

Response: We believe our term medications is expansive and not limiting. We in no way limit what any provider chooses to include or not include in their conduct of a medication reconciliation. As we are focused on the use of CEHRT to assist in medication reconciliation it is not our intent to develop a definitive definition of what medication reconciliation is.

Comment: Commenters stated that the objective is so reliant on health information exchange that it should not be moved to core until health information exchange capability increases.

Response: Robust health information exchange is certainly of great assistance to medication reconciliation. However, it is not required for medication reconciliation. Nor is electronic health information exchange the only way EHRs can assist with medication reconciliation. So while we believe that medication reconciliation will become easier as health information exchange capability increases, it is not a prerequisite to performing medication reconciliation.

After consideration of the comments received, we are finalizing this objective as proposed for EPs at § 495.6(j)(13)(i) and for eligible hospitals and CAHs at § 495.6(l)(10)(i).

Proposed Measure: The EP, eligible hospital or CAH performs medication reconciliation for more than 65 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).

In the proposed rule, we stated that although the HITPC recommended maintaining this threshold at 50 percent we believed that due to this measure's role in information exchange that we seek to promote through meaningful use a higher measure was appropriate. Based on the performance of providers in Stage 1, we proposed to raise the measure to 65 percent.

Comment: If as stated in the proposed rule ''the majority chose to defer this measure in Stage 1,'' commenters asserted that this is insufficient information to justify raising the threshold to 65 percent and move the objective to core. Other commenters assert that any measure that moves from menu to core should maintain its Stage 1 threshold regardless of the particular measure's rate of deferral.

Response: After considering the arguments for lowering the threshold to 50 percent and the lack of robust data in support of the proposed threshold, we do lower the threshold to 50 percent. For this measure in particular, we agree that since most providers chose to defer this measure in Stage 1 the information available on performance from Stage 1 meaningful EHR users is not as robust as for other objectives and measures. We do not agree with the comment that all objectives that move from menu to core should maintain the same threshold. We believe such a blanket policy would be arbitrary and not properly account for the information available for each objective and measure. For example, if most Stage 1 meaningful EHR users had reported on this measure, there would be a robust data set of performance on which to judge a threshold. A blanket policy would ignore such information.

Comment: The denominator of transitions of care during the EHR reporting period for which the provider is the receiving part of the transition is imprecise and therefore difficult to determine, especially when neither the transitioning provider or patient notifies the provider of the transition.

Response: We addressed this comment earlier in this section in our discussion of meaningful use denominators and provided a minimum set of specific actions that would indicate a transition of care has occurred.

Comment: While the objective speaks to relevant encounters, these are not included in the measure. This makes measurement difficult for those providers that conduct medication reconciliation at more than just transitions of care. If providers were allowed to include these encounters in the measure, measurement would both be easier and more representative of the actual use of CEHRT by the provider.

Response: We continue to believe that what is a relevant encounter is to variable to be included in the measure for all providers. However, a provider who institutes a policy for medication reconciliation at encounters encompassing more than just the minimum actions defined by the transitions of care denominator can include those encounters in their denominator and if medication reconciliation is conducted at the encounter in the numerator as well.

After consideration of the comments, we are modifying the threshold of the measure for EPs at § 495.6(j)(13)(ii) and for eligible hospitals and CAHs at § 495.6(l)(10)(ii). The EP, eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(4).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of transitions of care during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) was the receiving party of the transition.
- *Numerator:* The number of transitions of care in the denominator where medication reconciliation was performed.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an EP, eligible hospital or CAH to meet this measure.
- *Exclusion:* Any EP who was not the recipient of any transitions of care during the EHR reporting period.

Proposed Objective: The EP, eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.

In the proposed rule, we outlined the following benefits of this objective. By assuring lines of communication between providers caring for the same patient, all of the providers of care can operate with better information and more effectively coordinate the care they provide. Electronic health records, especially when linked directly or through health information exchanges, reduce the burden of such communication. The purpose of this objective is to ensure a summary of care record is provided to the receiving provider when a patient is transitioning to a new provider or has been referred to another provider while remaining under the care of the referring provider.

In the proposed rule, we proposed to eliminate the Stage 1 objective for the exchange of key clinical information for Stage 2 and instead include such information as part of the summary of care when it is a part of the patient's electronic record. We also proposed to incorporate two separate Stage 2 recommendations from the HIT Policy Committee as required fields in the summary of care record—

• Record care plan fields, including goals and instructions, for at least 10 percent of transitions of care; and

• Record team member, including primary care practitioner, for at least 10 percent of patients.

ONC also proposed in their standards and certification criteria rule (77 FR 13848 to include these as standard fields required to populate the summary of care document so CEHRT will be able to include this information. We provided a description of a ''care plan'' as well as the minimum components it must include for purposes of meaningful use, although we recognized that the actual content would be dependent on the clinical context. We asked for comments on both our description of a care plan and whether a description is necessary for purpose of meaningful use.

We proposed certain elements that are listed in the proposed rule (77 FR 13722) to be included in the summary care document. In circumstances where there is no information available on an element, either because the EP, eligible hospital or CAH can be excluded from recording such information or because there is no information to record, the EP, eligible hospital or CAH may leave the field(s) blank and still meet the objective and its associated measure.

In addition, we proposed that all summary of care documents used to meet this objective must include the following:

• An up-to-date problem list of current and active diagnoses.

• An active medication list, and

• An active medication allergy list.

We proposed that all summary of care documents must contain the most recent and up-to-date information on these three elements to count in the numerator. We proposed to define problem list as a list of current and active diagnoses. We solicited comment on whether the problem list should be extended to include, ''when applicable, functional and cognitive limitations'' or whether a separate list should be included for functional and cognitive limitations. We proposed to define an up-to-date problem list as a list populated with the most recent diagnoses known by the EP or hospital. We proposed to define active medication list as a list of medications that a given patient is currently taking. We proposed to define active medication allergy list as a list of medications to which a given patient has known allergies. We proposed to define allergy as an exaggerated immune response or reaction to substances that are generally not harmful. In the event that there are no current or active diagnoses for a patient, the patient is not currently taking any medications, or the patient has no known medication allergies, confirmation of no problems, no medications, or no medication allergies would satisfy the measure of this objective. Note that the inclusion and verification of these elements in the summary of care record replaces the Stage 1 objectives for ''Maintain an up-to-date problem list,'' ''Maintain active medication list,'' and ''Maintain active medication allergy list.''

Comment: Commenters suggested that the required data for each type of referral and transitions varies and that rather than creating a list of elements, the provider should decide what is needed.

Response: While we agree that tailoring the summary of care document for each referral and transition of care is desirable, we disagree that this means a list of basic elements that should be in each summary of care documents is not appropriate. We note that most organizations that try and tackle the issue of summary of care documents have required fields, core sets or other nomenclature for elements that they believe should be in all summary of care documents. For example, the CDA architecture used as the standard for the summary of care document contains required and optional fields. The American College of Physicians in their Neighborhood Model uses a core data set. None of these organizations intend for their list of elements to be limiting and nor do we intend our list to be limiting, but rather serve as a minimum. In our proposed rule we went further and said that if the provider does not have the information available to populate one or more of the fields listed, either because they can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, laboratory tests), the provider may leave the field(s) blank. The only exception to this is the problem list, medication list, and medication allergy list. Therefore, we are including a list of elements in this final rule.

Comment: Commenters stated that their understanding is that if any of the fields specifically for problem list, medication list, or allergy list is blank (meaning no entry of problems, medications or allergies nor an indication that it is known by the provider that the patient has no problems, medication or allergies), the EP or hospital will not meet the measure, but that if any other information is blank, the EP or hospital will still meet the measure. Please clarify whether this is a correct understanding of the proposal.

Response: This understanding of our proposed rule is generally correct. The problem list, medication list and medication allergy list must also either contain problems, medications and medication allergy or a specific notation that the patient has none. Leaving the field entirely blank with no entry whatsoever would not meet the measure. However, in cases where the provider does not have the information available to populate one or more of the other fields listed, either because they can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, laboratory tests), the provider may leave the field(s) blank. Note this does not allow a provider to disable a listed field from being generated by the CEHRT, but rather allows for when the CEHRT does not contain information on which to generate an entry for the field.

Comment: Some commenters suggested the substitution of past medical history for historical problem list in the list of required elements, since past medical history could provide additional information valuable to patient care.

Response: CMS' Evaluation and Management Services Guide defines a past medical history as the patient's past ''experiences with illnesses, operations, injuries and treatments'' (see *http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/eval_mgmt_serv_guide-ICN006764.pdf*, p. 11). In our proposed rule, we referred to ''current and historical problem list'' as this is more concrete and standards based than the definition for past medical history. We believe the concept of past medical history is inclusive of current and historical problem list. We understand that providers are more familiar with the term past medical history and will evaluate expanding historical problem list to past medical history for Stage 3. However, for Stage 2, we are finalizing current and historical problem list. For summary of care documents at transitions of care we encourage providers to send a list of items that he or she believes to be pertinent and relevant to the patient's care, rather than a list of all problems, whether they are active or resolved, that have ever populated the problem list. While a current problem list should always be included, the provider can use his or her judgment in deciding which items historically present on the problem list, PMHx list (if it exists in CEHRT), or surgical history list are

included given the clinical circumstances.

Comment: Commenters stated that it is too burdensome to determine whether the problem list, medication list and medication allergy list are included in each summary of care document.

Response: We disagree that this is too burdensome. We note that in Stage 1 measuring the completeness of the problem list, medication list and medication allergy list is already a requirement. Summary of care documents are generated by the CEHRT based on the information available to it. Therefore, there are only two causes of error that would have to be discovered to make the determination of whether the problem list, medication list and medication allergy list are included. The problem list, medication list and medication allergy list do not contain information for a given patient and/or there is an error in the generation of the summary of care document. This discovery constitutes the burden of this measure. We have already noted that the ability to know whether the lists contain information is already a Stage 1 measure. The second issue is prevalent in nearly every meaningful use measure that requires CEHRT to generate a measurement so that burden is already integral to meaningful use.

Comment: Commenters stated that the different descriptions of problem list throughout the proposed rule create confusion. The four terms used are ''an up-to-date problem list of current and active diagnoses'', ''problem list'', ''Current problem list and any updates to it'' and ''problem list maintained by the hospital on the patient''. CMS should use this term uniformly. Furthermore, the limitation of the problem list to only current and active diagnoses is inconsistent with how problem lists are used and historical problems should also be included.

Response: We only proposed one definition of the base term ''problem list'', which is a list of current and active diagnoses. We then use descriptors to tailor the term to the objective in which it is being utilized. For example, ''up-to-date'' means that the problem list in the CEHRT is populated with the most recent diagnoses known by the EP or hospital. The description used for office visit summary ''Current problem list and any updates to it'' was intended to separate problems that were known before the visit and those that were determined during the visit. We agree that our limitation of the ''problem list'' to just current and active diagnoses is unnecessarily limiting. The C–CDA, which is the standard adopted for EHR technology certification, for summary of care documents states that ''at a minimum, all pertinent current and historical problems should be listed''. We revise our definition of ''problem list'' to include historical problems. This is a minimum. We do not limit the provider to just including diagnoses on the problem list. We agree that there should be just one definition of the base term ''problem list''; however, we disagree that the same list is appropriate for every case especially with the addition of the historical problems. Some objectives call for the current problem list which includes only those diagnoses of problems currently affecting the patient. Other objectives call for the current and historical problem list, which would include problems currently affecting the patient as well as those that have been resolved. For purposes of clarity, we are consolidating across all of the meaningful use objectives to just two descriptions of our term ''problem list'': ''current problem list'' and ''current and historical problem list.'' This consolidation also removes the need for a separate item of past relevant diagnosis as these would be included in a historical problem list. We define active medication list as a list of medications that a given patient is currently taking. We define active medication allergy list as a list of medications to which a given patient has known allergies. We define allergy as an exaggerated immune response or reaction to substances that are generally not harmful. Information on problems, medications, and medication allergies could be obtained from previous records, transfer of information from other providers (directly or indirectly), diagnoses made by the EP or hospital, new medications ordered by the EP or in the hospital, or through querying the patient. In the event that there are no current or active diagnoses for a patient, the patient is not currently taking any medications, or the patient has no known medication allergies, confirmation of no problems, no medications, or no medication allergies would satisfy the measure of this objective.

Comment: Many commenters recommended against any specification of problem list content regarding functional and cognitive limitations citing insufficient consensus around the appropriate classification of these functions. Commenters also stated that if included, functional and cognitive limitations should be further defined.

Response: As noted earlier in this final rule under the demographic objective, we wish to clarify that both the concepts of physical and cognitive disabilities as well as the concept of functional limitations that impact an individual's capability to perform activities were included in our description of disability status for the purpose of this rule. The latter concept is a common metric for care planning and care coordination across settings because knowledge of a patient's abilities (for example, functional and/or cognitive status) are also necessary for clinical practice. While many commenters noted the lack of consensus for the terms and standards necessary to support the inclusion of disability, functional and cognitive status assessment and observations into the Consolidated CDA for summary of care records, we understand that this standard was updated to include section- and data-entry level templates that can describe a patient's functional and cognitive status. However, we agree that there are insufficient definitions for disability, functional and cognitive status assessment and observations to include them as part of the problem list. Therefore, we are including ''functional status, including functional, cognitive and disability'' as a separate element in the summary of care document.

Comment: In regard to the inclusion of ''care plan field'' in the list of required information, some commenters believed that the wording was overly prescriptive since CEHRT could utilize multiple fields to structure care plans. Other commenters requested a more detailed definition of care plan and/or the standards that are available or required.

Response: We agree that the language proposed could be viewed as prescriptive, and we do not intend to limit the inclusion of the care plan to a single field. Therefore, we are amending the language to ''Care plan field(s), including goals and instructions'' in our list of required elements below. However, we decline to provide an alternate definition that would limit the information in the care plan. We believe that the definition we proposed in the proposed rule is sufficient to allow for the inclusion of a variety of care plans in the clinical summary. For purposes of the clinical summary, we define a care plan as the structure used to define the management actions for the various conditions, problems, or issues. A care plan must include at a minimum the following components: Problem (the focus of the care plan), goal (the target outcome), and any instructions that the provider has given to the patient. A goal is a defined target or measure to be achieved in the process of patient care (an expected outcome).

Comment: Commenters stated that while the care team members are clearly important data elements and key to clinical coordination, they recommended further research into true standards to support these elements before any requirements are imposed.

Response: Our proposal is to include ''Any additional known care team members beyond the referring or transitioning provider and the receiving provider''. We believe that the ability to identify providers is well established. We note that there is no requirement to identify the role of each provider which we would agree are not well established beyond PCP and referring provider. We also note that this is only for cases when the other care team members are known by the transitioning provider. These allowances are sufficient to accommodate the current standard limitations and therefore we finalize as proposed.

Comment: As referrals are included in the denominator as well as transitions of care, the summary of care document should include the reason for the referral.

Response: We agree with this comment and add reason for referral for EPs. The reason for the referral is the clinical question the referring provider wants answered for a consultation or the procedure to be performed. If the consultation is more open ended, then a brief summary of the case details pertinent to referral suffices.

After consideration of the comments, all summary of care documents used to meet this objective must include the following information if the provider knows it:

- Patient name.
- Referring or transitioning provider's name and office contact information (EP only).
- Procedures.
- Encounter diagnosis.
- Immunizations.
- Laboratory test results.
- Vital signs (height, weight, blood pressure, BMI).
- Smoking status.
- Functional status, including activities of daily living, cognitive and disability status.
- Demographic information (preferred language, sex, race, ethnicity, date of birth).
- Care plan field, including goals and instructions.
- Care team including the primary care provider of record and any additional known care team members beyond the referring or transitioning provider and the receiving provider.
- Discharge instructions (Hospital Only).
- Reason for referral (EP only).

In circumstances where there is no information available to populate one or more of the fields listed previously, either because the EP, eligible hospital or CAH can be excluded from recording such information (for example, vital signs) or because there is no information to record (for example, laboratory tests), the EP, eligible hospital or CAH may leave the field(s) blank and still meet the objective and its associated measure.

In addition, all summary of care documents used to meet this objective must include the following in order to be considered a summary of care document for this objective:

- Current problem list (Providers may also include historical problems at their discretion),
- Current medication list, and
- Current medication allergy list.

An EP or hospital must verify these three fields for current problem list, current medication list, and current medication allergy list are not blank and include the most recent information known by the EP or hospital as of the time of generating the summary of care document.

After consideration of public comments, we are finalizing this objective for EPs at § 495.6(j)(14)(i) and for eligible hospitals and CAHs at § 495.6(l)(11)(i) as proposed.

Proposed Measures: EPs, eligible hospitals, and CAHs must satisfy both measures in order to meet the objective:

The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 65 percent of transitions of care and referrals.

The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care electronically transmits a summary of care record using CEHRT to a recipient with no organizational affiliation and using a different CEHRT vendor than the sender for more than 10 percent of transitions of care and referrals.

First Measure: We proposed that if the provider to whom the referral is made or to whom the patient is transitioned has access to the medical record maintained by the referring provider, then the summary of care record would not need to be provided and that patient should not be included in the denominators of the measures of this objective. We stated in the proposed rule that different settings within a hospital using the same CEHRT would have access to the same information, so providing a clinical care summary for transfers within the hospital would not be necessary.

Comment: If as stated in the proposed rule ''the majority chose to defer this measure in Stage 1'', commenters asserted this is insufficient information to justify raising the threshold to 65 percent and move the objective to core. Other commenters assert that any measure that moves from menu to core should maintain its Stage 1 threshold regardless of the particular measure's rate of deferral.

Response: After considering the arguments for lowering the threshold to 50 percent and the lack of a robust data set in support of the proposed threshold, we do lower the threshold to 50 percent. For this measure in particular, we agree that since most providers chose to defer this measure in Stage 1 the information available on performance from Stage 1 meaningful EHR users is not as robust as for other objectives and measures. We do not agree with the comment that all objectives that move from menu to core should maintain the same threshold. We believe such a blanket policy would be arbitrary and not properly account for the information available for each objective and measure. For example, if most Stage 1 meaningful EHR users had reported on this measure, there would be a robust data set of performance on which to judge a threshold. A blanket policy would ignore such information.

Comment: Commenters questioned and requested clarification on situations where the recipient of the transition or referral is using the same instance of CEHRT or otherwise has access to the CEHRT of the transitioning or referring provider. Some of these commenters acknowledged our proposal to address this situation were also split between support for our proposal to exclude these from the denominator versus allowing them to be in the denominator and numerator of both measures. Also commenters expressed concern on whether this was a measurable constraint. Finally, commenters requested clarification on whether our proposal applied to one or both measures.

Response: We proposed that if the provider to whom the referral is made or to whom the patient is transitioned has access to the medical record maintained by the referring provider, then the summary of care record would not need to be provided and that patient should not be included in the denominators of the measures of this objective. We believe that different settings within a hospital using CEHRT would have access to the same information, so providing a clinical care

summary for transfers within the hospital would not be necessary. This is a continuance of our current Stage 1 policy. In response to comments, this policy applies to both measures. We clarify the first sentence that access to the medical record could be through several mechanisms. Some providers will be in the same organization and share CEHRT outright. Other providers might grant remote access to their CEHRT to providers not sharing their same CEHRT. We do not limit the mechanisms through which access is granted. We disagree that this access should count in the denominator or numerator of either measure. A summary of care document generated by CEHRT conforms to specific standards and could in many cases be automatically integrated into the recipient's CEHRT. Access provides no such capability. For this reason, we finalize our policy of excluding these transitions and referrals from the denominator. However, if a transitioning or referring provider provides both access and a summary of care document to providers outside their organization and wishes to include them in their denominator and as appropriate their numerator, they can do so. Finally, while we agree that it some cases it may be difficult to determine whether the recipient has access to the sender's CEHRT. We do not believe that we should remove an accommodation due to measurement difficulties. It is acceptable for a provider to include these transitions and referrals in the denominator, but only if a summary of care document is provided would it count in the numerator.

Comment: Commenters stated that there are some providers who may engage in a small number of transitions of care and referrals and the implementation burden of this objective is too high to require of those with only a small number. This is particularly true as the requirement for electronic health information exchange is introduced.

Response: We have previously allowed for a more than zero, but less than 100 exclusion for our other objective requiring electronic health information exchange (eRx); therefore, in response to these comments we will apply that policy to this objective and measure as well and raise the exclusion from zero to less than 100 transitions of care and referrals. Transitions of care and referrals are additive so someone with 50 transitions of care and 75 referrals would not qualify for the exclusion.

After consideration of public comments, we are revising the measure for EPs at § 495.6(j)(14)(ii)(A) and for eligible hospitals and CAHs at § 495.6(l)(11)(ii)(A) to ''The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals.''

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(l) and (b)(2)(i).

To calculate the percentage of the first measure, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of transitions of care and referrals during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) was the transferring or referring provider.
- *Numerator:* The number of transitions of care and referrals in the denominator where a summary of care record was provided.
- *Threshold:* The percentage must be more than 50 percent in order for an EP, eligible hospital, or CAH to meet this measure.
- *Exclusion:* Any EP who transfers a patient to another setting or refers a patient to another provider less than 100 times during the EHR reporting period is excluded from all three measures.

Second Measure: For Stage 2, we proposed the additional second measure for electronic transmittal because we believe that the electronic exchange of health information between providers will encourage the sharing of the patient care summary from one provider to another and the communication of important information that the patient may not have been able to provide, which can significantly improve the quality and safety of referral care and reduce unnecessary and redundant testing. Use of common standards can significantly reduce the cost and complexity of interfaces between different systems and promote widespread exchange and interoperability. In acknowledgement of this, ONC has included certain transmission protocols in the proposed 2014 Edition EHR certification criteria.

These protocols would allow every provider with CEHRT to have the tools in place to share critical information when patients are discharged or referred, representing a critical step forward in exchange and interoperability. Accordingly, we proposed to limit the numerator for this second measure to only count electronic transmissions which conform to the transport standards proposed for adoption at 45 CFR 170.202 of the ONC standards and certification criteria rule.

To meet the second measure of this objective, we proposed that a provider must use CEHRT to create a summary of care document with the required information according to the required standards and electronically transmit the summary of care document using the transport standards to which its CEHRT has been certified. No other transport standards beyond those proposed for adoption as part of certification would be permitted to be used to meet this measure.

In the proposed rule, we acknowledged the benefits of requiring the use of consistently implemented transport standards nationwide, but at the same time want to be cognizant of any unintended consequences of this approach. ONC requested comments on whether equivalent alternative transport standards exist to the ones ONC proposes to exclusively permit for certification. These comments are addressed in the ONC standards and certification final rule published elsewhere in this issue of the **Federal Register**. We noted in the proposed rule that the use of USB, CD–ROM, or other physical media or electronic fax would not satisfy the measures for electronic transmittal of a summary of care record. We discussed in the proposed rule, in lieu of requiring solely the transmission capability and transport standard(s) included in a provider's CEHRT to be used to meet this measure, also permitting a provider to count electronic transmissions in the numerator if the provider electronically transmits summary of care records to support patient transitions using an organization that follows Nationwide Health Information Network (NwHIN) specifications (*http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__nhin_resources/1194*). This could include those organizations that are part of the NwHIN Exchange as well as any organization that is identified through a governance mechanism ONC would establish through regulation. We requested public comment on whether this additional flexibility should be added to our proposed numerator limitations.

In the proposed rule we raised another potential concern that another transport standard emerges after CMS' and ONC's rules are finalized that is not adopted in a final rule by ONC as part of certification, but nonetheless accomplishes the objective in the same way. To mitigate this concern, ONC indicated in its proposed rule that it

would pursue an off-cycle rulemaking to add as an option for certification transport standards that emerge at any time after these proposed rules are finalized in order to keep pace with innovation and thereby allow other transport standards to be used and counted as part of this measure's numerator. We asked for comments on how these standards will further the goal of true health information exchange.

Additionally, in order to foster standards based-exchange across organizational and vendor boundaries, we proposed to further limit the numerator by only permitting electronic transmissions to count towards the numerator if they are made to recipients that are—(1) not within the organization of the transmitting provider; and (2) do not have CEHRT from the same EHR vendor.

We proposed these numerator limitations because, in collaboration with ONC, our experience has shown that one of the biggest barriers to electronic exchange is the adoption of numerous different transmission methods by different providers and vendors. Thus, we explained that it would be prudent for Stage 2 to include these more specific requirements and conformance to open, national standards as it will cause the market to converge on those transport standards that can best and most readily support electronic health information exchange and avoid the use of proprietary approaches that limit exchange among providers. We recognized that because the 2011 Edition EHR certification criteria did not include specific transport standards for transitions of care, some providers and vendors implemented their own methods for Stage 1 to engage in electronic health information exchange, some of which would no longer be an acceptable means of meeting meaningful use if this proposal were finalized.

Therefore, in order to determine a reasonable balance that makes this measure achievable yet significantly advance interoperability and electronic exchange, we asked for comment on the following concerns stakeholders may have relative to the numerator limitations we proposed previously.

We discussed a potential concern related to the feasibility of meeting this proposed measure if an insufficient number of providers in a given geographic location (because of upgrade timing or some other factor) have EHR technology certified to the transport standards ONC has proposed to adopt. For example, a city might have had a widely adopted health information exchange organization that still used another standard than those proposed for adoption by ONC. While it is not our intent to restrict providers who are engaged in electronic health information exchange via other transport standards, we believe requiring the use of a consistent transport standard could significantly further our overarching goals for Stage 2.

We recognized that this limitation extends beyond the existing parameters set for Stage 1, which specified that providers with access to the same medical record do not include transitions of care or referrals among themselves in either the denominator or the numerator. We recognized that this limitation could severely limit the pool of eligible recipients in areas where one vendor or one organizational structure using the same EHR technology has a large market share and may make measuring the numerator more difficult. We sought comment on the extent to which this concern could potentially be mitigated with an exclusion or exclusion criteria that account for these unique environments. We believe the limitation on organizational and vendor affiliations is important because even if a network or organization is using the standards, it does not mean that a network is open to all providers. Certain organizations may find benefits, such as competitive advantage, in keeping their networks closed, even to those involved in the care of the same patient. We believe this limitation will help ensure that electronic transmission of the summary of care record can follow the patient in every situation.

Even without the addition of the proposed exclusions under the proposed measure, CEHRT would need to be able to distinguish between (1) electronic transmissions sent using standards and those that are not, (2) transmission that are sent to recipients with the same organizational affiliation or not, and (3) transmissions that are sent to recipients using the same EHR vendor or not. ONC sought comment in their proposed certification rule as to the feasibility of this reporting requirement for CEHRT.

Despite the possible unintended consequences of the parameters we proposed for the numerator, in the proposed rule we stated that we believed that these limitations would help ensure that electronic health information exchange proceeds at the pace necessary to accomplish the goals of meaningful use. We asked for comments on all these points and particularly suggestions that would both push electronic health information exchange beyond what is proposed and minimize the potential concerns expressed previously.

The HIT Policy Committee recommended different thresholds for EPs and hospitals for the electronic transmission measure, with a threshold of only 25 instances for EPs. However, we proposed a percentage-based measure is attainable for both EPs and eligible hospitals/CAHs and better reflects the actual meaningful use of technology. It also provides a more level method for measurement across EPs. We asked for comments on whether there are significant barriers in addition to those discussed above to EPs meeting the 10 percent threshold for this measure.

Comment: There were several comments that doubted that the technology will be ready for providers to meet this measure. They did not believe there is enough vendor support to create, customize, and implement the changes necessary to meet the new measure. Commenters expressed concern that many of the technologies, from EHRs to HIEs and transmission standards, needed to enable electronic health information exchange currently do not exist.

Response: We disagree that it is premature to include this measure for Stage 2. We note that as an incentive program it is expected that the requirements will reach beyond what is commonplace today. Many organizations and providers are successfully engaged in electronic health information exchange today and by including this measure in meaningful use those established practices will be adopted by a greater number of providers.

Comment: A commenter suggested that ONC's certification rule was the appropriate place to ensure cross-vendor interoperability, not the Stage 2 measures and objectives.

Response: While we agree that meaningful use should be enabled by the capabilities included in certification, the concept of meaningful use is to incentivize the use of such capabilities not just the acquisition of them.

Comment: Commenters expressed two concerns on the limitation on the numerator that limited it to recipients with no organizational affiliation and using a different CEHRT vendor. First, there was concern that in some markets an organization or CEHRT vendor may control such a significant share of the market that meeting 10 percent is not possible. Second, even if the 10 percent threshold was feasible in a given market, one organization or CEHRT vendor may have enough market share

that the provider's referral patterns would inappropriately be influenced to give preference to those using different CEHRT vendors or outside their organizations. Commenters support appropriate information exchange between all providers, where clinically relevant, regardless of provider affiliations, but have these concerns on our proposed measure for this objective. Commenters presented several different solutions including removing one or both limitations, replacing the limitations with an error reporting system for instances where electronic health information exchange fails, moving the limitations to the denominator and providing exclusions for areas of high vendor or organizational market penetrations.

Response: We agree that the measure as proposed runs both risks stated by commenters. Of the solutions presented by commenters, one directly alleviates both of these concerns. In drafting the final rule, we considered moving the limitations from the numerator to the denominator of the measure, both concerns are addressed. For example, if a provider makes 500 referrals during the EHR reporting period, 400 of which are to providers that either are affiliated with the same organization or use the same CEHRT vendor, then only 100 referrals are even eligible for the proposed numerator. This creates a bar that is much higher than 10 percent, as 50 percent of the eligible instances must be electronically transmitted to meet the proposed measure in this example, which we agree has the possibility of influencing referral patterns. However, applying the limitations of ''no organizational affiliation'' and ''different CEHRT vendor'' to the denominator instead of the numerator would result, in this example, in a denominator of 100 referrals instead of 500 and a true 10 percent threshold. There would be no need to change referral patterns as there would be no negative effect on the threshold for having a referral partner either in the same organization or using the same CEHRT vendor. We firmly believe that this solution is the best measure of the type of health information exchange that we proposed to target and that is supported in principle by nearly all commenters. However, we are not including this solution in the final rule as explained in the response to the next set of comments. Instead, we are removing the organizational and vendor limitations from this measure solely due to the burden of making these determinations for measurement.

Comment: Many commenters expressed concern over the ability to measure this objective especially the organization and vendor limitations. Commenters who were providers expressed concern over the ability of their CEHRT vendor to measure this objective, while vendors of CEHRT expressed concern over the ability of providers to measure the objective. Combined, it appears that neither the provider nor the vendor believed they could even measure on their own and had concerns on their partners on which they placed their hopes for measurement.

Response: In the proposed rule we determined that the CEHRT would have to be able to make three determinations to successfully calculate the numerator for this measure: (1) Electronic transmissions sent using standards and those that are not; (2) transmissions that are sent to recipients with the same organizational affiliation or not; and (3) transmissions that are sent to recipients using the same EHR vendor or not. We stated that ONC will seek comment in their proposed certification rule as to the feasibility of this reporting requirement for certified EHR technologies. ONC received comments similar to ours that making the determinations for the numerator was infeasible particularly in regard to the organizational and vendor limitations. Therefore, we are removing the organizational and vendor limitations from this measure solely due to the burden of making these determinations for measurement. Commenters did not suggest difficulties with determining that the electronic transmission was sent using the specified standards. Therefore, we finalize the stipulation that CEHRT be used, including its accompanying standards for this measure (''measure 2'').

However, we are not abandoning all efforts to ensure that cross vendor electronic exchange is possible for all meaningful EHR users in Stage 2. As discussed in the prior comment and response, the only reason we are not finalizing the stipulations on the denominator is the measurement burden. We believe that a third measure is needed that reduces the burden relative to the proposed measure, but still ensures that all providers have implemented CEHRT in a way that enables them to electronically exchange summary of care documents with a recipient using EHR technology designed by a different vendor. Therefore, we have added a third measure (''measure 3'') that requires providers to use their CEHRT to either—

- Conduct one or more successful electronic exchanges of a summary of care document, which is counted in measure 2 with a recipient who has EHR technology designed by a different EHR technology developer than the sender's EHR technology certified to 45 CFR 170.314(b)(2); or
- Conduct one or more successful tests with the CMS designated test EHR during the EHR reporting period.

For the first option in measure 3, the sender must verify that the recipient's technology used to receive the summary of care record was not designed by the same EHR technology developer that designed the sender's EHR technology certified to 45 CFR 170.314(b)(2).

With respect to the second option in measure 3, and recognizing past difficulties and lessons learned from a ''test'' oriented measure in Stage 1, we have collaborated with ONC and NIST to initiate a project that would result in a public facing (hosted online) ''test EHR'' with which EPs, eligible hospitals, and CAHs could engage in electronic exchange. We expect that most providers will satisfy the first option in the normal course of meeting measure 2. However, in those rare instances where that does not occur this other second option would give every EP, eligible hospital, or CAH an alternative method to meet measure 3 with minimal burden by successfully testing electronic exchange with the CMS-designated test EHR. If this second option is used, we clarify that the use of test information about a fictional patient that would be identical in form to what would be sent about an actual patient (for example, ''dummy data'') must be used for the purposes of conducting a test with the CMS-designated test EHR. Providers that use the same EHR technology certified to 45 CFR 170.314(b)(2) and share a network for which their organization either has operational control or license to use can conduct one test that covers all providers in the organization. For example, if a large group of EPs with multiple physical locations use the same EHR technology certified to 45 CFR 170.314(b)(2) and those locations are connected using a network that the group has either operational control of or license to use, then a single test would cover all EPs in that group. Similarly, if a provider uses an EHR technology that is hosted (cloud-based) on the developer's network, then a single test would allow all EPs, eligible hospitals and CAHs using the EHR technology that is hosted (cloud-based) on the developer's network to meet the measure.

While making this does impose a burden on the provider, we believe the burden is outweighed by the benefits of ensuring that every provider who

becomes a meaningful EHR user is capable of exchanging a summary of care document electronically regardless of who developed the sender's EHR and the recipient's EHR.

We also seek to note for readers that while we have significantly reduced this objective's burden from what we proposed in measure 2, we continue to believe that making vendor to vendor standards-based exchange attainable for all meaningful EHR users is of paramount importance. In that regard, and as we look toward meaningful use Stage 3, we will monitor the ease with which EPs, eligible hospitals, and CAHs engage in electronic exchange, especially across different vendors EHRs. If we do not see sufficient progress or that continued impediments exist such that our policy goals for standards-based exchange are not being met, we will revisit these more specific measurement limitations and consider other policies to strengthen the interoperability requirements included in meaningful use as well as consider other policies and regulations through which the Department could effect the outcome we seek. Finally, we also intend to consider future meaningful use requirements that increase expectations for standards-based exchange and make information that is exchanged more searchable and usable for a broad array of clinical purposes imperative to care improvement. We envision that these requirements would rely on metadata tagging as well as more dynamic methods of electronic health information exchange.

Comment: Commenters expressed support for including in this measure's numerator electronic transmissions enabled by query-based exchange models, including organizations using NwHIN Exchange specifications. The commenters indicated that NwHIN Exchange specifications are appropriate for exchange use cases not covered as well by the Direct standards, and use of either standard should be counted. This is particularly important in cases where the summary is pulled instead of pushed. Providers and organizations that are part of the NwHIN Exchange or other organizations using these standards should receive credit for those exchanges in meeting interoperability measures.

Response: In Stage 2, all providers should be able to use CEHRT to share summary of care records in a ''push'' manner to support safe transitions and informed referrals. ''Pull'' (query) transactions can also support these goals. By ''pull'' transactions we refer to instances where the receiving provider retrieves the summary of care document from a location outside their own CEHRT as opposed to ''push'' transactions where the referring or transitioning provider sends the summary of care document to the receiving provider. Thus, such transactions should be counted towards the numerator of the provider initiating the transitions or referrals when the recipient (the provider ''receiving'' the transition or referral) actually receives or downloads the patient's summary of care record relevant to the transition or referral. The act of uploading the summary of care record to a repository that *can* be queried by the recipient—without validation that this query in fact occurred will not be sufficient to count towards the numerator. While we acknowledge that there may not be a simple, universal way for this to be measured, we believe it is important to make this accommodation for those who elect to engage in this form of exchange. Therefore, we are revising the second measure to include in the sending provider's numerator instances where the recipient receives the summary of care record via exchange facilitated by an organization that is an NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. The referring or transitioning provider would use their CEHRT to generate a summary of care document and to provide it an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. More information on NwHIN Exchange participants is available at *http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov__nhin_exchange/1407*. ONC issued a request for information regarding a governance mechanism for the nationwide health information network that is available at 77 FR 28543.

After considering the comments received, we are modifying the second measure for EPs at § 495.6(j)(14)(ii)(B) and for eligible hospitals and CAHs at § 495.6(l)(11)(ii)(B) to ''The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 10 percent of such transitions and referrals either (a) electronically transmitted using CEHRT to a recipient or (b) where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network.''

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(l) and (b)(2).

To calculate the percentage of the second measure, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of transitions of care and referrals during the EHR reporting period for which the EP or eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) was the transferring or referring provider.
- *Numerator:* The number of transitions of care and referrals in the denominator where a summary of care record was a) electronically transmitted using CEHRT to a recipient or b) where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. The organization can be a third-party or the sender's own organization.
- *Threshold:* The percentage must be more than 10 percent in order for an EP, eligible hospital or CAH to meet this measure.
- *Exclusion:* Any EP who transfers a patient to another setting or refers a patient to another provider less than 100 times during the EHR reporting period is excluded from all three measures.

Third Measure: After considering the comments received, we are adding a third measure for EPs at § 495.6(j)(14)(ii)(C) and for eligible hospitals and CAHs at § 495.6(l)(11)(ii)(C) to ''An EP, eligible hospital or CAH must satisfy one of the two following criteria:

- Conducts one or more successful electronic exchanges of a summary of care document, which is counted in ''measure 2'' (for EPs the measure at § 495.6(j)(14)(ii)(B) and for eligible hospitals and CAHs the measure at § 495.6(l)(11)(ii)(B)) with a recipient who has EHR technology that was designed by a different EHR technology developer than the sender's EHR technology certified to 45 CFR 170.314(b)(2); or
- Conducts one or more successful tests with the CMS designated test EHR during the EHR reporting period.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the

capabilities and standards of CEHRT at 45 CFR 170.314(b)(2).

• *Exclusion:* Any EP who transfers a patient to another setting or refers a patient to another provider less than 100 times during the EHR reporting period is excluded from all three measures.

(c) Public Health Objectives

General Public Health Discussion

In the proposed rule, due to similar considerations among the public health objectives, we discussed them together. Some Stage 2 public health objectives are proposed to be in the core set while others are proposed to be in the menu set. Each objective is identified as either core or menu in the following discussion.

• Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.

• Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.

• Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

• Capability to identify and report cancer cases to a state cancer registry except where prohibited, and in accordance with applicable law and practice.

• Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.

We proposed the following requirements, which will apply to all of the public health objectives and measures. We proposed that actual patient data is required for the meaningful use measures that include ongoing submission of patient data.

We discussed in the proposed rule situations where PHAs partner with health information exchange (HIE) organizations to facilitate the submission of public health data electronically from EHRs. As we stated in guidance for Stage 1, (see FAQ #10764 at: *https://questions.cms.hhs.gov*) we clarified that such arrangements with HIE organizations, if designated by the PHA to simply transport the data, but not transforming content or message format (for example, HL7 format), are acceptable for the demonstration of meaningful use. Alternatively, if the intermediary is serving as an extension of the EP, eligible hospital or CAH's CEHRT and performing capabilities for which certification is required (for example, transforming the data into the required standard), then that functionality must be certified in accordance with the certification program established by ONC. In this situation, the EP, eligible hospital or CAH must still ensure the accomplishment of ongoing submission of reports to the actual immunization information system or registry (whether performed by the intermediary or not), except in situations when the PHA has explicitly designated delivery of reports to the intermediary as satisfying these requirements.

We proposed that an eligible provider is required to utilize the transport method or methods supported by the PHA in order to achieve meaningful use.

Unlike in Stage 1, under our proposed Stage 2 criteria a failed submission will not meet the objective. An eligible provider must either have successful ongoing submission or meet an exclusion criterion.

We stated in the proposed rule that we expect that CMS, CDC and PHAs will establish a process where PHAs will be able to provide letters affirming that the EP, eligible hospital or CAH was able to submit the relevant public health data to the PHA. This affirmation letter could then be used by the EP, eligible hospital or CAH for the Medicare and Medicaid meaningful use attestation systems, as well as in the event of any audit. We requested comments on challenges to implementing this strategy.

We proposed to accept a yes/no attestation and information indicating to which PHA the public health data were submitted to support each of the public health meaningful use measures.

Comment: Commenters asked for clarification of ongoing submission; additionally, due to the amount of time needed to prepare for submission of data, commenters asked for clarification on the timing to determine if a public health authority has the capacity to accept electronic data for ongoing submission. Other commenters noted that being ''in queue'' or in the process of validation for ongoing submission should count as meeting this measure. Commenters also noted that credit should be given for having moved into ongoing submission during Stage 1.

Response: To clarify the timing issue, the EP or hospital must determine if the PHA has the capacity to accept electronic data using the specification prescribed by ONC for the public health information for the objectives of meaningful use within the first 60 days of the EHR reporting period. If the PHA does not have the capacity to accept reporting (including situations when the PHA accepts electronic data but states it lacks capacity to enroll the EP, eligible hospital or CAH during that reporting period), the EP or hospital can claim an exclusion for this measure related to the data that cannot be accepted. In determining whether the PHA has the capacity, CMS anticipates developing a centralized repository for this information, including a deadline for the PHA to submit information. If the PHA fails to provide information to this centralized repository by the deadline, the provider could claim the exclusion. In the event, that we are unable to develop a centralized repository, providers will make the determination of PHA capacity by working directly with the PHA as is currently the case for Stage 1 of meaningful use. If the PHA does have the capacity, the measure may be satisfied through any of the following general public health criteria:

• Ongoing submission was already achieved for an EHR reporting period in a prior year and continues throughout the current EHR reporting period using either the current standard at 45 CFR 170.314(f)(1) and (f)(2) or the standards included in the 2011 Edition EHR certification criteria adopted by ONC during the prior EHR reporting period when ongoing submission was achieved.

• Registration with the PHA or other body to whom the information is being submitted of intent to initiate ongoing submission was made by the deadline (within 60 days of the start of the EHR reporting period) and ongoing submission was achieved.

• Registration of intent to initiate ongoing submission was made by the deadline and the EP or hospital is still engaged in testing and validation of ongoing electronic submission.

• Registration of intent to initiate ongoing submission was made by the deadline and the EP or hospital is awaiting invitation to begin testing and validation.

The measure will not be met if the provider—

• Fails to register their intent by the deadline; or

• Fails to participate in the on-boarding process as demonstrated by failure to respond to the PHA written requests for action within 30 days on two separate occasions.

Comment: Several commenters expressed concern that no data transport mechanism was included in the Stage 2 rule and/or EHR certification. Some expressed concern that the lack of a

standard may result in EPs paying more for interfaces than received in incentive payments. Other commenters supported including no transport mechanism to allow maximum flexibility for public health authorities.

Response: While we understand the concern of supporting multiple transport mechanisms, in order for data to flow to public health authority, vendors must support the transport mechanism utilized by the public health authority to which the EP or hospital reports. Public health authorities have moved to standardize transport mechanisms where feasible, and Health Information Exchanges are often facilitating the transport of data to public health. We stand by our policy that allows public health authorities to dictate the transport mechanism in their jurisdiction. Further, we clarify that this is independent of the EHR certification criteria as EHR certification does not address transport for public health objectives.

Comment: Commenters suggested that the expectation that public health agencies provide affirmation letters is too restrictive in accomplishing the goal of established a record of communication between the provider and the PHA. They maintain that there are simpler and less burdensome ways such as automated acknowledgment messages from immunization submissions.

Response: We agree that our proposal requiring it must be a letter is too restrictive and revise our expectation to allow for any written communication (which may be in electronic format) from the PHA affirming that the EP, eligible hospital or CAH was able to submit the relevant public health data to the PHA.

Comment: Commenters requested greater clarification on what is meant by ongoing submission. Some suggested that it be transitioned to a percentage measurement as with other objectives of meaningful use.

Response: We do not agree that a transition to a percentage measurement best serves the public health objectives. First, a percentage measure would only be applicable to those engaged in ongoing submission, and as indicated in an earlier response, we are allowing four different situations to meet the measure. Second, we believe that the requirement to submit information would be under applicable law, the agreements between the provider and PHA, or through meaningful use which requires submissions except where prohibited, so it is not necessary for meaningful use to monitor the already mandated submission. For greater clarification, we describe successful ongoing submission as electronic submission of reportable data during the normal course of a provider's operations. This is not to say all data that is reportable is sent to the PHA. A provider who is submitting any reportable data during their normal course of their operations is engaged in ongoing submission. A provider that can only submit reportable data in a test environment or other circumstance that is not part of their normal operations would not be engaged in ongoing submission.

Where a measure states ''in accordance with applicable law and practice,'' this reflects that some public health jurisdictions may have unique requirements for reporting and that some may not currently accept electronic data reports. In the former case, the proposed criteria for this objective will not preempt otherwise applicable state or local laws that govern reporting. In the latter case, EPs, eligible hospitals, and CAHs will be excluded from reporting.

Comment: Several commenters requested the removal of ''except where prohibited'' from the objective, while others expressed support for this phrase. Those that did not support note that CMS does not have the authority to direct reporting if not required by law or regulations, while supporters applauded CMS for supporting reporting where allowed but not required by law. Several commenters suggested removing the phrase ''in accordance with applicable law,'' while other commenters wrote in support of the addition of the phrase.

Response: We disagree with the commenters suggesting removal of these phrases and will keep them as part of the final rule. The phrase ''except where prohibited'' is meant to allow exemptions from reporting for providers who cannot by law report to the public health authority within their jurisdiction. For example, a sovereign Indian Nation may not be permitted to report immunization registry data to the public health authority in their jurisdiction. The phrase is meant to encourage reporting if a provider is authorized to do so. The ''in accordance with applicable law'' phrase allows public health authorities to utilize their existing laws and regulations for reporting.

Proposed Objective: Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.

We proposed to include this objective in the Stage 2 core set for EPs, eligible hospitals and CAHs as recommended by the HITPC. We discussed in the proposed rule that the Stage 1 objective and measure acknowledged that our nation's public health IT infrastructure is not universally capable of receiving electronic immunization data from CEHRT, either due to technical or resource readiness. Immunization programs, their reporting providers and federal funding agencies, such as the CDC, ONC, and CMS, have worked diligently since the passage of the HITECH Act in 2009 to facilitate EPs, eligible hospitals and CAHs ability to meet the Stage 1 measure. We proposed for Stage 2 to take the next step from testing to requiring actual submission of immunization data. In order to achieve improved population health, providers who administer immunizations must share that data electronically, to avoid missed opportunities or duplicative vaccinations. Stage 3 is likely to enhance this functionality to permit clinicians to view the entire immunization registry/immunization information system record and support bi-directional information exchange.

We proposed that the threshold for Stage 2 should move from simply testing the electronic submission of immunization data (with follow-up submission if the test is successful) to ongoing submission. However, we asked for comments on the challenges that moving this objective from the menu set to the core set would present for EPs and hospitals.

Comment: Some commenters suggested that the term immunization information systems was all encompassing making the inclusion of immunization registries redundant.

Response: We agree that an information system could include registries; however, we do not believe that modifying the objective serves a distinct purpose and could confuse those accustomed to the term immunization registries.

Comment: Commenters, although supportive of moving immunization registry reporting from menu to core, expressed concern that PHAs did not have the capacity to accept electronic data from additional providers.

Response: We agree that not all PHAs will have the resources to onboard providers for immunization registry reporting. The final rule allows for an EP or hospital to be excluded from the measure if they operate in a jurisdiction for which no immunization registry is capable of accepting data. We further clarify that this exception applies not only if the technical capacity to receive the data does not exist, but also if the resources are not available within the

public health authority to initiate ongoing submission with the EP or hospital. We also permit (as earlier stated) an EP or hospital to meet the measure so long as they have registered to submit and are either still in the process of testing and validation (within the time limits established earlier), or are still awaiting an invitation to begin submission.

Comment: Numerous commenters encouraged the inclusion of bidirectional exchange of data with immunization registries. Many commenters noted that the EP or eligible hospital cannot take advantage of rich data and clinical decision support contained within an immunization registry without bidirectional exchange.

Response: While we agree that the need for bidirectional data exchange is clear, this measure aligns more with the goals of Stage 3 meaningful use stated in the proposed rule. Additionally, the standards and mechanisms for bidirectional data exchange need to be more standardized across public health authorities.

After consideration of the public comments received, we are finalizing this objective for EPs at § 495.6(j)(15)(i) and for eligible hospitals and CAHs at § 495.6(l)(12)(i) as proposed.

Proposed Measure: Successful ongoing submission of electronic immunization data from CEHRT to an immunization registry or immunization information system for the entire EHR reporting period.

Comment: Many commenters noted the lack of national standards for the collection of immunization data with specific examples such as CVS versus MVX coding vocabularies and also noted the need for centralized data collection at a national level. Commenters noted that the lack of standardization results in cost-prohibitive compliance with this measure.

Response: We agree that during the implementation of Stage 1 reporting of immunization data, the need for a more harmonized standard for immunization reporting was highlighted. To address this issue, the option of using version HL7 2.3.1 versus 2.5.1 for certification was removed and now only an HL7 2.5.1 message can be used for Stage 2 reporting of immunization data. The implementation guide for HL7 2.5.1 has been updated to remove much of the variability across states for immunization registry reporting. However, if EPs prior to CY 2014 and eligible hospitals and CAHs prior to FY2014 have achieved successful ongoing submission using EHR technology certified to the 2011 Edition EHR certification criteria (HL7 2.3.1 only) it is acceptable to continue this ongoing submission and meet the Stage 2 measure for as long as HL7 2.3.1 continues to be accepted by the immunizations information system or immunization registry. EPs and eligible hospitals and CAHs conducting submissions using HL7 2.5.1 will be able to get their arrangement certified to the 2014 Edition EHR certification criteria.

After consideration of the public comments received, we are finalizing this measure at for EPs at 495.6(j)(15)(ii) and for eligible hospitals and CAHs at 495.6(l)(12)(ii) as proposed, but we modify the exclusions to conform with the general criteria for public health objectives and to address redundancy in two of the proposed exclusions. In the general criteria for public health objectives section we established a centralized repository of information about PHA capacity. If a PHA does not provide capacity information to this repository in time for it to be made available to providers at the start of their EHR reporting period, then the providers in that PHA's jurisdiction will meet the modified exclusion. We proposed two exclusions: (1) The EP, eligible hospital or CAH operates in a jurisdiction for which no immunization registry or immunization information system is capable of receiving electronic immunization data in the specific standards required for CEHRT at the start of their EHR reporting period; and (2) the EP, eligible hospital or CAH operates in a jurisdiction for which no immunization registry or immunization information system is capable of accepting the version of the standard that the EP, eligible hospital or CAH's CEHRT can send at the start of their EHR reporting period. In both cases the limitation is the ability of the immunization registry or immunization information system to receive immunization data in the standards required by ONC for EHR certification in 2014. Therefore, we are combining these exclusions.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(f)(1) and (f)(2). However, if EPs prior to CY 2014 and eligible hospitals and CAHs prior to FY 2014 have achieved successful ongoing submission using EHR technology certified to the 2011 Edition EHR certification criteria (HL7 2.3.1 only), it is acceptable to continue this ongoing submission and meet the Stage 2 measure for as long as HL7 2.3.1 continues to be accepted by the immunizations information system or immunization registry. We note that our decision to continue to permit the use of EHR technology certified to the 2011 Edition EHR certification criteria is a special circumstance and emphasize that EPs, eligible hospitals, and CAHs will still need EHR technology certified to the 2014 Edition EHR certification criteria in order to meet the CEHRT definition beginning with the FY/CY 2014 EHR reporting period.

- *Exclusions:* Any EP, eligible hospital or CAH that meets one or more of the following criteria may be excluded from this objective: (1) The EP, eligible hospital or CAH does not administer any of the immunizations to any of the populations for which data is collected by their jurisdiction's immunization registry or immunization information system during the EHR reporting period; (2) the EP, eligible hospital or CAH operates in a jurisdiction for which no immunization registry or immunization information system is capable of accepting the specific standards required for CEHRT at the start of their EHR reporting period (3) the EP, eligible hospital or CAH operates in a jurisdiction where no immunization registry or immunization information system provides information timely on capability to receive immunization data; or (4) the EP, eligible hospital or CAH operates in a jurisdiction for which no immunization registry or immunization information system that is capable of accepting the specific standards required by CEHRT at the start of their EHR reporting period can enroll additional EPs, eligible hospitals or CAHs.

The second exclusion will not apply if an entity designated by the immunization registry or immunization information system can receive electronic immunization data submissions. For example, if the immunization registry cannot accept the data directly or in the standards required by CEHRT, but if it has designated a Health Information Exchange to do so on their behalf and the Health Information Exchange is capable of accepting the information in the standards required by CEHRT, the provider could not claim the second exclusion.

Proposed Eligible Hospital/CAH Objective: Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.

We proposed that this objective is in the Stage 2 core set for eligible hospitals and CAHs. The same rationale for the

proposed changes between this proposed objective and that of Stage 1 are discussed earlier under the immunization registry objective. Please refer to that section for details on our proposals in this regard.

Comment: Commenters, although supportive of moving electronic laboratory reporting from menu to core, expressed concern that PHAs did not have the capacity to accept electronic data from additional providers.

Response: We agree that not all PHAs will have the resources to onboard providers for electronic laboratory reporting. The final rule allows for an EP, eligible hospital or CAH to be excluded from the measure if they operate in a jurisdiction for which no public health authority is capable of accepting electronic laboratory data. We further clarify that this exception applies not only if the technical capacity to receive the data does not exist, but also if the resources are not available within the public health authority to initiate ongoing submission with the EP, eligible hospital or CAH. We also permit (as earlier stated) an EP, eligible hospital or CAH to meet the measure so long as they have registered to submit and are either still in the process of testing and validation, or are still awaiting an invitation to begin submission.

Comment: Many commenters noted that lack of standards for reporting electronic laboratory data to public health authorities and also noted the variety of transport methods needed to support reporting to public health.

Response: ONC has adopted an updated implementation guide for electronic laboratory reporting from EHR technology in its 2014 Edition EHR certification criteria. Additionally, the Centers for Disease Control and Prevention in coordination with the Council of State and Territorial Epidemiologists have created the national Reporting Condition Mapping Table (*http://www.cdc.gov/EHRmeaningfuluse/rcmt.html*) that provides further guidance on appropriate vocabularies usable for reportable conditions across the country for reporting of ELR data.

Comment: Several commenters wrote in favor of expansion of this requirement to be inclusive of the surveillance of healthcare associated infections (HAI).

Response: While we agree that the reporting of healthcare associated infections is a critical part of public health surveillance, the methods and standards for reporting this information require very different standards for electronic laboratory reporting of reportable conditions. This measure aligns more with the goals of Stage 3 meaningful use.

Comment: Numerous commenters suggested that Electronic Laboratory Reporting is outside the scope of EHRs and should be excluded from the objectives. These commenters note that laboratory information systems (LIMS) already have ELR capabilities, and most EHRs do not. One commenter expressed concern that reporting from both laboratories and providers may cause duplicate reporting of a single case. The same commenter stated that many LIMS systems already have functionality to identify which laboratory results need to be reported to public health, which EHRs do not, and that building that capability into EHRs would be duplicative and burdensome.

Response: We disagree with the statement that ELR is ''outside the scope of EHRs and should be excluded'' because we share ONC's broad interpretation of the term EHR technology. Eligible Hospitals can choose to report data directly from any kind of EHR technology that has been certified to the certification criteria adopted by ONC. This could include EHR technology from a single EHR technology developer, a separate modularly certified component such as a LIMS certified as an EHR Module, or the technical capability offered by an HIE that is certified as an EHR Module for electronic laboratory reporting.

After consideration of the public comments, we are finalizing this objective for eligible hospitals and CAHs at 495.6(l)(13)(i) as proposed.

Proposed Eligible Hospital/CAH Measure: Successful ongoing submission of electronic reportable laboratory results from CEHRT to a public health agency for the entire EHR reporting period as authorized, and in accordance with applicable State law and practice.

Please refer to the general public health discussion regarding use of intermediaries.

Most comments received related to this measure have been addressed in the discussion of public health objectives in general or in the discussion of the objective associated with this measure.

Comment: Commenters pointed out that the proposed measure includes the statement ''as authorized, and in accordance with applicable State law and practice.'' Some commenters believed the phrase was simply redundant to the objective and was inconsistent with the other public health measures. Other commenters expressed concern that the addition of the phrase implied a more restrictive measure than other public health measures particularly with the limit to state law as opposed to just law.

Response: We agree with commenters that this phrase is redundant to the objective and may introduce confusion. Therefore, we are revising this measure to remove the phrase and make it consistent with the other public health measures.

Based on consideration of those comments, we are modifying this measure for eligible hospitals and CAHs at § 495.6(l)(13)(ii) to successful ongoing submission of electronic reportable laboratory results from CEHRT to a public health agency for the entire EHR reporting period.'' We also modify the exclusions to conform with the general criteria for public health objectives. In the general criteria for public health objectives, we plan to establish a centralized repository of PHA capacity information. If a PHA does not provide capacity information to this repository in time for it to be made available to providers at the start of their EHR reporting period, then the providers in that PHA's jurisdiction will meet the modified exclusion. If the repository is not established, the eligible hospital or CAH must consult their PHA jurisdiction for guidance.

We further specify that in order to meet this objective and measure, an eligible hospital or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(f)(4).

• *Exclusions:* The eligible hospital or CAH that meets one or more of the following criteria may be excluded from this objective: (1) operates in a jurisdiction for which no public health agency is capable of receiving electronic reportable laboratory results in the specific standards required for Certified EHR Technology at the start of the EHR reporting period; (2) operates in a jurisdiction where no public health agency provides information timely on capability to receive electronic reportable laboratory results or (3) the eligible hospital or CAH operates in a jurisdiction for which no public health agency that is capable of accepting the specific standards required by CEHRT at the start of their EHR reporting period can enroll additional eligible hospitals or CAHs.

Proposed Objective: Capability to submit electronic syndromic surveillance data to public health agencies except where prohibited, and in accordance with applicable law and practice.

We proposed that this objective is in the Stage 2 core set for eligible hospitals and CAHs and the Stage 2 menu set for EPs. The Stage 1 objective and measure

acknowledged that our nation's public health IT infrastructure is not universally capable of receiving syndromic surveillance data from CEHRT, either due to technical or resource readiness. Given public health IT infrastructure improvements and new implementation guidance, for Stage 2, we proposed that this objective and measure be in the core set for hospitals and in the menu set for EPs. It is our understanding from hospitals and the CDC that many hospitals already send syndromic surveillance data. The CDC has issued the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data [*http://www.cdc.gov/ehrmeaningfuluse/Syndromic.html*] as cited in the ONC final rule on EHR standards and certification. However, per the CDC and a 2010 survey completed by the Association of State and Territorial Health Officials (ASTHO), very few public health agencies are currently accepting syndromic surveillance data from ambulatory, non-hospital providers, and there is no corresponding implementation guide at the time of this final rule. CDC is working with the syndromic surveillance community to develop a new implementation guide for ambulatory and inpatient discharge reporting of syndromic surveillance information, which it expects will be available in the spring 2013. We anticipate that Stage 3 might include syndromic surveillance for EPs in the core set if the collection of ambulatory syndromic data becomes a more standard public health practice in the interim.

The HIT Policy Committee recommended making this a core objective for Stage 2 for EPs and hospitals. However, we did not propose to adopt their recommendation for EPs. We specifically invited comment on the proposal to leave syndromic surveillance in the menu set for EPs, while requiring it in the core set for eligible hospitals and CAHs.

Comment: Commenters noted that keeping the objective as menu for EPs is still problematic as most public health agencies are unable to accept the data. Commenters also expressed that for providers that are already reporting this objective, it makes sense to keep it as a menu set option.

Response: We agree that although not all public health authorities are able to accept syndromic surveillance data from Eligible Professionals, since many EPs already report this measure and some public health authorities have the ability to accept this data, the measure will remain as a menu set option.

Comment: Commenters noted that moving the objective as core is premature due to public health readiness. Commenters also expressed that for hospitals that have already reporting this objective, it makes sense to move the measure to core.

Response: We agree that not all public health authorities are able to accept syndromic surveillance data from hospitals; however, our exclusion criteria addresses this situation. Since many hospitals already report this measure and many public health authorities have the ability to accept this data, the measure will remain as core. If there are no public health authorities for the hospitals to report syndromic surveillance data to, the hospital can claim an exemption.

Comment: Many commenters noted that lack of standards for reporting syndromic surveillance data to public health authorities.

Response: While a single national implementation guide exists for syndromic surveillance data of emergency department data from hospitals, currently an implementation guide does not exist for syndromic surveillance reporting from the eligible professional. The Centers for Disease Control and Prevention is working in conjunction with the International Society for Disease Surveillance and draft guidance is currently available for the reporting of ambulatory based syndromic surveillance.

Comment: Several comments expressed concern about the level of reporting. Concern was expressed from entities with multiple locations that would need to report by facility or provider lever rather than as an organization.

Response: Currently public health departments that collect syndromic surveillance data streamline the data collection process and collect data at an organization or facility level depending on the provider. Syndromic surveillance data is not collected at the provider level, although attestation would be at the provider level where reporting by a single organization or facility could count for multiple providers.

After consideration of the public comments received, we are finalizing this objective for EPs in the menu set at § 495.6(k)(3)(i) and for eligible hospitals and CAHs in the core set at § 495.6(l)(14)(i) as proposed.

Proposed Measure: Successful ongoing submission of electronic syndromic surveillance data from CEHRT to a public health agency for the entire EHR reporting period.

All comments received related to this measure have been addressed in the discussion of public health objectives in general or in the discussion of the objective associated with this measure. After consideration of these public comments, we are finalizing this measure as proposed for EPs in the menu set at § 495.6(k)(3)(ii) and for eligible hospitals and CAHs in the core set at § 495.6(l)(14)(ii) as proposed, but we modify the exclusions to conform with the general criteria for public health objectives and to address redundancy in two of the proposed exclusions. In the general criteria for public health objectives, we plan to establish a centralized repository of PHA capacity information. If a PHA does not provide capacity information to this repository in time for it to be made available to providers at the start of their EHR reporting period, then the providers in that PHA's jurisdiction will meet the modified exclusion. We proposed two exclusions: (1) The EP, eligible hospital, or CAH operates in a jurisdiction for which no public health agency is capable of receiving electronic syndromic surveillance data in the specific standards required for Certified EHR Technology at the start of their EHR reporting period; and (2) the EP, eligible hospital, or CAH operates in a jurisdiction for which no public health agency is capable of accepting the version of the standard that the EP's, eligible hospital's or CAH's CEHRT can send at the start of their EHR reporting period. In both cases the limitation is the ability of the PHA to receive syndromic surveillance data in the standards required by ONC for EHR certification in 2014. Therefore, we are combining these exclusions.

We expect that the CDC will be issuing (in Spring 2013) the CDC PHIN Messaging Guide for Ambulatory Syndromic Surveillance and we may rely on this guide to determine which categories of EPs will not collect such information.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(f)(3). However, if EPs prior to CY 2014 and eligible hospitals and CAHs prior to FY 2014 have achieved successful ongoing submission using EHR technology certified to the 2011 Edition EHR certification criteria (HL7 2.3.1 only), it is acceptable to continue this ongoing submission and meet the Stage 2 measure for as long as HL7 2.3.1 continues to be accepted by the PHA in that jurisdiction. We note that our decision to continue to permit the use of EHR technology certified to the 2011 Edition EHR certification criteria is a special circumstance and

emphasize that EPs, eligible hospitals, and CAHs will still need EHR technology certified to the 2014 Edition EHR certification criteria in order to meet the CEHRT definition beginning with the FY/CY 2014 EHR reporting period.

• *Exclusions:* Any EP, eligible hospital or CAH that meets one or more of the following criteria may be excluded from this objective: (1) the EP is not in a category of providers that collect ambulatory syndromic surveillance information on their patients during the EHR reporting period; (2) the eligible hospital or CAH does not have an emergency or urgent care department; (3) the EP, eligible hospital, or CAH operates in a jurisdiction for which no public health agency is capable of receiving electronic syndromic surveillance data in the specific standards required by CEHRT at the start of their EHR reporting period; (4) the EP, eligible hospital or CAH operates in a jurisdiction where no public health agency provides information timely on capability to receive syndromic surveillance data; or (5) the EP, eligible hospital or CAH operates in a jurisdiction for which no public health agency that is capable of accepting the specific standards required by CEHRT at the start of their EHR reporting period can enroll additional EPs, eligible hospitals or CAHs.

As was described under the immunization registry measure, the third and fourth exclusions do not apply if the PHA has designated an HIE organization or other intermediary to collect this information on its behalf and that intermediary can do so in the specific Stage 2 standards and/or the same standard as the provider's CEHRT. An urgent care department delivers ambulatory care, usually on an unscheduled, walk-in basis, in a facility dedicated to the delivery of medical care, but not classified as a hospital emergency department. Urgent care centers are primarily used to treat patients who have an injury or illness that requires immediate care but is not serious enough to warrant a visit to an emergency department. Often urgent care centers are not open on a continuous basis, unlike a hospital emergency department, which will be open at all times.

(d) New Core and Menu Set Objectives and Measures for Stage 2

We proposed the following objectives for inclusion in the core set for Stage 2: ''Provide patients the ability to view online, download, and transmit information about a hospital admission'' and ''Automatically track medication orders using an electronic medication administration record (eMAR)'' for hospitals; ''Use secure electronic messaging to communicate with patients'' for EPs. We proposed all other new objectives for inclusion in the menu set for Stage 2. While the HIT Policy Committee recommended making all objectives mandatory and eliminating the menu option, we believe a menu set is necessary for some of these new objectives in order to give providers an opportunity to implement new technologies and make changes to workflow processes and to provide maximum flexibility for providers in specialties that may face particular challenges in meeting new objectives.

Proposed Objective: Imaging results and information are accessible through CEHRT.

In the proposed rule, we outlined the following benefits for this objective. Making the image that results from diagnostic scans and accompanying information accessible through CEHRT increases the utility and efficiency of both the imaging technology and the CEHRT. The ability to share the results of imaging scans will likewise improve the efficiency of all health care providers and increase their ability to share information with their patients. This will reduce the cost and radiation exposure from tests that are repeated solely because a prior test is not available to the provider.

We stated in the proposed rule that most of the enabling steps to incorporating imaging relate to the certification of EHR technologies. As with the objective for incorporating lab results, we encourage the use of electronic exchange to incorporate imaging results into the CEHRT, but in absence of such exchange it is acceptable to manually add the image and accompanying information to CEHRT.

Comment: Some commenters expressed concerns over the ability of CEHRT to store the images.

Response: We did not propose that CEHRT store the images. Storing the images natively in CEHRT is one way to make them accessible through CEHRT, but there are many other ways.

Comment: Commenters stated that unless a HIE organization existed to facilitate imaging exchange, building out an unique interface for each imaging provider is cost prohibitive. Second, commenters were concerned that because stand-alone radiology centers are not subject to the EHR Incentive Program they may not agreeing to provide their images electronically to the provider through their EHR. These commenters therefore suggest that it is premature to include this objective.

Response: We agree that many advances in infrastructure are needed to fully enable this objective. We believe that from publication of this final rule to the start of Stage 2 significant progress will be made in part due to the inclusion of this objective in Stage 2. We do agree that these improvements in infrastructure will vary based on local conditions such as the presence of HIEs, the willingness of radiology centers to link to EHRs, and other factors and note that is a primary reason for this being a menu objective. We will also consider these comments below in relation to setting the threshold for the measure.

Comment: The resolution required for viewing imaging for diagnostic purposes requires specific hardware which would be cost prohibitive for all EPs. CMS should clarify that the image can be of any resolution.

Response: We do not impose limitations on the resolution of the image. To the extent this is a concern, it would be a capability of CEHRT not a requirement of meaningful use.

Comment: Commenters requested clarification on whether both the image itself and the accompanying results and information must be available, or just one or the other.

Response: The objective as proposed was intended to convey that the image itself is the result and that narratives/explanations and other information would be the additional information. Due to the many comments we received requesting clarification, we are revising the objective for clarity.

Comment: Commenters requested a more specific definition of imaging.

Response: We believe that imaging is a well understood term in the provider community. However, we agree that a more specific definition is required for purposes of measuring meaningful use. We adopt the description of radiology services from the Stage 2 CPOE objective as the minimum description of imaging. Providers are free to use a more expansive definition of imaging.

After review of the comments, we are revising the objective for EPs at 495.6 (k)(1)(i) and for eligible hospitals and CAHs at 495.6(m)(2)(i) to ''Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through CEHRT.''

Proposed Measure: More than 40 percent of all scans and tests whose result is one or more images ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the

EHR reporting period are accessible through CEHRT.

For Stage 2, we did not propose the image or accompanying information (for example, radiation dose) be required to be structured data. Images and imaging results that are scanned into the CEHRT may be counted in the numerator of this measure. We defined accessible as either incorporation of the image and accompanying information into CEHRT or an indication in CEHRT that the image and accompanying information are available for a given patient in another technology and a link to that image and accompanying information. Incorporation of the image means that the image and accompanying information is stored by the CEHRT. We did not propose that meaningful use would impose any additional retention requirements on the image. A link to the image and accompanying information means that a link to where the image and accompanying information is stored is available in CEHRT. This link must conform to the certification requirements associated with this objective in the ONC final rule published elsewhere in this issue of the **Federal Register**. We encouraged comments on the necessary level of specification and what those specifications should be to define accessible and what constitutes a direct link.

Comment: Commenters suggested that the proposed threshold of 40 percent was too high given the dependency on the image provider and electronic exchange infrastructure discussed in the objective. The most popular suggested threshold was 10 percent. Commenters also suggested that an exclusion be created for providers who have no access to electronic images. A few of the commenters pointed to the lack of an imaging provider that could make electronic images available. Others were concerned that when a provider uses multiple imaging providers, 40 percent might be too high of a threshold even if at least one imaging provider that could make electronic images available.

Response: After reviewing the comments, we agree that 40 percent is too high of a threshold for this measure and revise it to 10 percent. Providers, especially EPs, may use many imaging providers, and we do not want an EP to have to defer this objective simply because they have three imaging providers, and the one allowing electronic access represents less than 40 percent of their orders. The comment regarding complete lack of an imaging provider that could make electronic images available speaks to the need for an exclusion. In considering an exclusion for those providers who have no access to electronic images, we take into account that it is a menu objective and also that there may be providers who fall into a situation where access is more than zero, but less than 10 percent. In regards to the menu, while it is true that a provider may defer this measure, the number of measures in the menu set are fewer and more specialized than in Stage 1. Furthermore, as an exclusion no longer counts towards meeting a menu objective, we are not concerned providers would choose this objective only to exclude it. For this reason, we are finalizing an exclusion for providers who have no access to electronic images. For those who cannot meet the 10 percent threshold even with access to an imaging provider who makes electronic images available, deferral remains a possibility as well as shifting more orders to imaging providers that do allow electronic access.

Comment: Several commenters disagreed with the proposed exclusion for EPs and believed it was inconsistent with the objective. These commenters believe the objective is intended for EPs who order imaging, whether or not they interpret the imaging studies themselves. These commenters suggested changing the exclusion to ''Any EP who orders (less than 100/50/no) diagnostic scans or tests whose result is an image during the EHR reporting period''.

Response: Our intention with the proposed exclusion was to distinguish between ordering providers who have need of the image and those that do not. Based on the comments the need to view the image depends on a combination of factors including previous experiences with the type of image, the imaging facility, the circumstances of the patient, whether a similar image has been ordered before for the patient and the reading clinician. Given the wide variety of factors, we agree that it is not possible to create a distinct line between ordering providers who need the image and those that do not. We believe this line can be partly drawn by adopting the exclusion recommended by comments with a high count of 100. This is both consistent with our other objectives and as a high number indicates a particular benefit to the provider as well as increasing the likelihood that factors align for the ordering provider to need the image.

Comment: Commenters stated that the use of the term ''scan'' is confusing and unnecessary. Scan frequently applies to actions and concepts other than certain types of imaging procedures.

Response: We agree that the term scan has multiple uses, as any scan would be an image and could be classified as a test. Therefore, we remove the word scan from the measure as duplicative.

After reviewing the comments, we modify the measure for EPs at § 495.6 (k)(1)(ii) and for eligible hospitals and CAHs at § 495.6(m)(2)(ii) to: More than 10 percent of all tests whose result is one or more images ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period are accessible through CEHRT.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(12).

To calculate the percentage, CMS and ONC have worked together to define the following for this measure:

- *Denominator:* Number of tests whose result is one or more images ordered by the EP or by an authorized provider on behalf of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period.
- *Numerator:* The number of results in the denominator that are accessible through CEHRT.
- *Threshold:* The resulting percentage must be more than 10 percent in order to meet this measure.
- *Exclusion:* Any EP who orders less than 100 tests whose result is an image during the EHR reporting period; or

Any EP who has no access to electronic imaging results at the start of the EHR reporting period.

No access means that none of the imaging providers used by the EP provide electronic images and any explanation or other accompanying information that are accessible through their CEHRT at the start of the EHR reporting period.

We solicited comments on a potential second measure for this objective that would encourage the exchange of imaging and results between providers. We considered a threshold of 10 percent of all scans and tests whose result is one or more images ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period and accessible through CEHRT also be exchanged with another provider of care.

Comment: While most commenters agree with the principle of exchange of images among providers of care, they nearly all agreed that this measure would be premature for Stage 2 due to

infrastructure concerns. Some suggested that it be considered for Stage 3 as a logical next step from our proposed Stage 2 measure.

Response: Given the comments, we are not including this measure in our final rule. We will consider the input provided when we develop our proposal for Stage 3.

Proposed Objective: Record patient family health history as structured data

In the proposed rule, we noted that every provider currently requests a family health history from the patient in order to obtain it. However, EHRs can allow the patient to contribute directly to the record and allow the record to be shared among providers, thereby greatly increasing the efficiency of collecting family health histories. Family health history is a major risk indicator for a variety of chronic conditions for which effective screening and prevention tools are available.

Comment: Commenters generally supported the inclusion of recording family health history as a menu set measure for EPs, eligible hospitals and CAHs, while some suggested deferring the measure until Stage 3 when they expect more robust standards will be available. Some commenters also suggested family health history is best collected by primary care physicians, not hospitals. Others still suggested modifying this objective to allow for the use of unstructured data.

Response: ONC has adopted standards requiring CEHRT to be able to use SNOMED–CT or the HL7 Pedigree standard to record a patient's family health history. We refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register**. As a readily available standard is being adopted, we are maintaining this objective as proposed and including it in the menu set. We continue to believe that family history is part of regular physician and hospital workflow—even if it's collected at a very high level. While it may primarily be the physicians working in the hospital that consider this information, these same physicians typically use the hospital EHR when evaluating their hospitalized patients so having this information in the hospital EHR is just as important as having it in the physician's own EHR. We will also finalize the exclusion for EPs who have no office visits during the EHR reporting period to account for scope of practice concerns and the common collection of this information directly from patients.

After consideration of public comments, we are finalizing this objective for EPs at § 495.6 (k)(2)(i) and for eligible hospitals and CAHs at § 495.6(m)(3)(i) as proposed.

Proposed Measure: More than 20 percent of all unique patients seen by the EP, or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.

We proposed to adopt the definition of first degree relative used by the National Human Genome Research Institute of the National Institutes of Health. A first degree relative is a family member who shares about 50 percent of their genes with a particular individual in a family. First degree relatives include parents, offspring, and siblings. We considered other definitions, including those that address both affinity and consanguinity relationships and encourage comments on this definition. We noted that this is a minimum and not a limitation on the health history that can be recorded. We did not propose a time limitation on the indication that the family health history has been reviewed. The recent nature of this capability in EHRs will impose a de facto limitation on review to the recent past.

We proposed an exclusion to this measure for EPs who have no office visits during the EHR reporting period. We believe that EPs who do not have office visits will not have the face-to-face contact with patients necessary to obtain family health history information.

Comment: Many commenters wondered why recording family health history was limited to first-degree relatives. They noted that a patient's grandparents or other relatives may have equally relevant medical information that should be included in the EHR. Other commenters pointed out that not all patients may know their family health history, particularly patients who were adopted, and suggested including a code for ''unknown'' or ''not relevant.'' They noted that in some cultures, the patient may not be willing to provide the data or that the data they have may be unreliable (such as informal adoptions in Native American tribes).

Response: While information about second degree relatives may be useful for some diagnoses and conditions, we believe collecting medical history from first degree relatives is the floor, not the ceiling and encourage providers to collect additional information as they see fit. Additionally, we understand concerns about patients who may not know their family history. In these situations, we would find it acceptable for the provider to record the patient's family history as ''unknown.'' Either a structured data entry of ''unknown'' or any structured data entry identified as part of the patient's family history and conforming to the standards of CEHRT at 45 CFR 170.314(a)(13) must be in the provider's CEHRT for the patient to count in the numerator.

Comment: Some commenters suggested we introduce this measure with a lower threshold as this is a new requirement, but did not specify a threshold. They noted that providers who might have previously captured family history might not have that in a structured format or not coded against the standards chosen for CEHRT. This history would have to be redocumented.

Response: We proposed a low threshold of 20 percent. As this measure is not reliant on other organizations and providers the way imaging is we do not believe that is necessary to lower the threshold further.

Comment: Some commenters suggested this measure may not apply to certain specialty providers (for example, Urgent Care, Orthopedics) and suggested including an exclusion.

Response: We proposed an exclusion to this measure for EPs who have no office visits during the EHR reporting period. We continue to believe that EPs who do not have office visits would not have the face-to-face contact with patients necessary to obtain family health history information. However, this exclusion may not apply to certain specialty providers (like the aforementioned). We continue believe that recording family health history, regardless of specialty, is can be an important indicator for chronic conditions. Additionally, as this measure is being finalized as part of the menu set, providers are not required to report on this objective.

After consideration of public comments, we are finalizing the measure for EPs at § 495.6(k)(2)(ii) and for eligible hospitals and CAHs at § 495.6(m)(3)(ii) to ''More than 20 percent of all unique patients seen by the EP, or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23), during the EHR reporting period have a structured data entry for one or more first-degree relatives''.

We are finalizing the exclusion as proposed at § 495.6(k)(2)(iii).

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(13).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator with a structured data entry for one or more first-degree relatives.
- *Threshold:* The resulting percentage must be more than 20 percent in order to meet this measure.
- *Exclusion:* Any EP who has no office visits during the EHR reporting period.

Proposed EP Objective: Capability to identify and report cancer cases to a state cancer registry, except where prohibited, and in accordance with applicable law and practice.

We outlined the following benefits of this objective in the proposed rule. Reporting to cancer registries by EPs would address current underreporting of cancer, especially certain types. In the past most cancers were diagnosed and/or treated in a hospital setting and data were primarily collected from this source. However, medical practice is changing rapidly and an increasing number of cancer cases are never seen in a hospital or are cared for primarily in the outpatient setting. Data collection from EPs presents new challenges since the infrastructure for reporting is less mature than it is in hospitals. Certified EHR technology can address this barrier by identifying reportable cancer cases and treatments to the EP and facilitating electronic reporting either automatically or upon verification by the EP.

We proposed to include ''except where prohibited and in accordance with applicable law and practice'' because we want to encourage all EPs to submit cancer cases, even in rare cases where they are not required to by state/local law. Legislation requiring cancer reporting by EPs exists in 49 states with some variation in specific requirements, per the 2010 Council of State and Territorial Epidemiologists (CSTE) State Reportable Conditions Assessment (SRCA) (*http://www.cste.org/dnn/ProgramsandActivities/PublicHealthInformatics/StateReportableConditionsQueryResults/tabid/261/Default.aspx*).'' If EPs are authorized to submit, they should do so even if it is not required by either law or practice.'' In accordance with applicable law and practice'' reflects that some public health jurisdictions may have unique requirements for reporting, and that some may not currently accept electronic provider reports. In the former case, the proposed criteria for this objective would not preempt otherwise applicable state or local laws that govern reporting. In the latter case, eligible professionals would be exempt from reporting.

Comment: Nearly all commenters who wrote in support of the objective stated that the rule would decrease reporting burden for EPs because cancer diagnosis reporting in mandatory in most states. One commenter noted that the rule may increase compliance with mandatory reporting by reducing time and effort needed to submit cancer diagnosis report. Also, it was noted that incorporation of cancer reporting in meaningful use Stage 2 for eligible providers will improve completeness and quality of cancer reporting. Conversely, several of the commenters who recommended moving the objective to Stage 3 or remove the objective completely stated that inclusion of this object would place undue burden on EPs, especially because primary care providers rarely report to cancer registries. A commenter noted that the necessary EHR functionality currently exists primarily in oncology specialty EHRs, and EPs may be required to purchase additional modules to meet this object, and further states that this would be cost-prohibitive to EPs who only rarely diagnose cancer. One commenter suggested that the detailed reporting requirements would be too time-consuming for most EPs. Another commenter questions if responsibility for reporting cases, or presumptive cases, would shift to primary care providers. Other commenters suggest that the objective should be removed until such time that a national central repository can be established to simplify point-to-point connections.

Response: We agree that inclusion of this requirement is likely to reduce reporting burden for those already required to report to cancer registries. We also agree with commenters that this objective is not relevant to all providers. For those EPs who do not meet the proposed exclusion of not diagnosing or directly treating cancer, yet are not already under a requirement to report to cancer registries, we note that this is a menu objective and can be deferred. Between the proposed exclusions and the option to defer, we do not believe the measure imposes a reporting burden on providers who would not normally report to cancer registries.

Comment: The objectives of specialized registries and cancer registries reporting should be combined.

Response: In review of comments we found no compelling reason to change our proposal. No commenter disputed that the reporting to cancer registries has different level of existing reporting requirements and supporting standards than other specialized registries.

Comment: One commenter suggested changing the final rule to read, ''public health central cancer registry'' to clearly distinguish them from hospital-based cancer registries.

Response: We agree that the term public health central cancer registry is better than just cancer registries and more inclusive than just state cancer registries as used in the proposed objective, but not the proposed measure.

After consideration of the public comments received, we are modifying this objective for EPs at § 495.6 (k)(4)(i) to ''Capability to identify and report cancer cases to a public health central cancer registry, except where prohibited, and in accordance with applicable law and practice.''

Proposed EP Measure: Successful ongoing submission of cancer case information from CEHRT to a cancer registry for the entire EHR reporting period.

Comment: Commenters are concerned that under the proposed menu set providers will be required to choose one of: (1) Syndromic surveillance; (2) submitting to cancer registries; or (3) submitting to specialty registries if they do not meet the exclusions for all three. The commenters believe that CMS should be providing physicians with a legitimate selection of menu set measures from which to choose.

Response: Stage 2 does contain a more specialized and smaller menu set than Stage 1. We see this as a natural result of moving up the staged path towards improved outcomes. We also see it as necessary for meaningful use to be applicable to all EPs. We use exclusions to ensure that only those EPs who create reportable data have the obligation under meaningful use to report it so this would not be a barrier to meeting meaningful use. Furthermore, we added an objective to the menu set in this final rule for EPs so it is no longer true that an EP would be required to pick one of the three menu objectives mentioned by commenters.

After consideration of the public comments received, we are modifying this measure for EPs at § 495.6 (k)(4)(ii) to ''Successful ongoing submission of cancer case information from CEHRT to a public health central cancer registry for the entire EHR reporting period'' and modify the exclusions to conform with the general criteria for public health objectives.

We further specify that in order to meet this objective and measure, an EP

must use the capabilities and standards of CEHRT 45 CFR 170.314(a), (c)(l), (f)(5), and (f)(6).

• *Exclusions:* Any EP that meets at least 1 of the following criteria may be excluded from this objective: (1) The EP does not diagnose or directly treat cancer; (2) the EP operates in a jurisdiction for which no public health agency is capable of receiving electronic cancer case information in the specific standards required for CEHRT at the beginning of their EHR reporting period; (3) the EP operates in a jurisdiction where no PHA provides information timely on capability to receive electronic cancer case information; (4) the EP operates in a jurisdiction for which no public health agency that is capable of receiving electronic cancer case information in the specific standards required for CEHRT at the beginning of their EHR reporting period can enroll additional EPs.

Proposed EP Objective: Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.

In the proposed rule, we outlined the following benefits of this objective. We believe that reporting to registries is an integral part of improving population and public health. The benefits of this reporting are not limited to cancer reporting. We include cancer registry reporting as a separate objective because it is more mature in its development than other registry types, not because other reporting is excluded from meaningful use. We have included this objective to provide more flexibility in the menu objectives that EPs can choose. We believe that specialized registry reporting could provide many EPs with meaningful use menu option that is more aligned with their scope of practice.

Comment: The overwhelming majority of individuals and groups who commented on this objective expressed concern about the lack of specificity of this objective. Their concerns include: (1) Lack of specificity of the potential types of registries make planning for vendors and EPs very difficult; (2) lack of information about who would define which registries may be included; (3) leaving dozens or hundreds of possibilities; (4) lack of clarity as to the definition of 'specialized registry; (5) lack of standards for many registries; (6) or potential of needing to comply with standards not identified in the proposed rule; and (7) lack of public health readiness to accept data from EHRs.

Response: The purpose of this objective and measure is to give meaningful use credit to those EPs who are engaged in ongoing submission with specialized registries. It is not expected that every EP will select this objective and measure from the menu nor even that every EP will have the capability to submit to a specialized registry. We are purposefully general in our description of specialized registry because we do not wish to exclude certain registries in an attempt to be more specific. The only limitation we place on our description of specialized registries is that the specialized registry cannot be duplicative of any of the other registries included in other meaningful use objectives and measures. This means that an EP cannot meet the immunization, syndromic surveillance or cancer objectives and this objective by reporting to the same registry. EPs who either do not wish to participate with a specialized registry or cannot overcome the barriers to doing so can defer or exclude this measure as their situation warrants.

Comment: Commenters expressed support for expansion of the requirement to streamline and improve surveillance of healthcare-associated infections (HAIs), with the goal of improving patient care and safety.

Response: A registry that is focused on healthcare associated infections could certainly be considered a specialized registry.

After consideration of the public comments received, we are finalizing this objective for EPs at § 495.6 (k)(5)(i) as proposed.

Proposed EP Measure: Successful ongoing submission of specific case information from CEHRT to a specialized registry for the entire EHR reporting period.

Comment: Since the lack of specificity and named standards make it difficult to select this measure from the menu set, the actual viable measures available in the menu set are reduced to four and burdensome for providers who may need to pay for interfaces, costing the EPs extra time and money above the cost of the CEHRT.

Response: Stage 2 does contain a more specialized and smaller menu set than Stage 1. We see this as a natural result of moving up the staged path towards improved outcomes. We also see it as necessary for meaningful use to be applicable to all EPs. We include exclusions that allow for those providers who do not create reportable data so every provider who would is required to report public health data would have public health data to report. Furthermore, we added an objective to the menu in this final rule for EPs so it is no longer true that an EP would be required to pick one of the three menu objectives. The purpose of this measure is to provide meaningful use credit to those providers engaged in the beneficial use of CEHRT of participating in specialized registries. Other EPs can either meet the exclusions or defer this objective and thereby avoid the burden of compliance with this objective.

Comment: Given the large number of specialized registries, many of which have national scope, the exclusions are rendered meaningless.

Response: We agree with this comment, and for purposes of the exclusion only, we limit it to registries sponsored by national specialty societies and specialized registries maintained by PHAs. We believe this provides needed limitations on the exclusions. This limitation does not apply to the specialized registries that can be used to satisfy the measure as the benefits are not limited only to reporting to registries operated by Public Health Agencies or national medical specialty organizations. Specialized registries operated by patient safety organizations and quality improvement organizations also enable knowledge generation or process improvement regarding the diagnosis, therapy and prevention of various conditions that affect a population.

After consideration of the public comments received, we are finalizing this measure for EPs at § 495.6 (k)(5)(ii) as proposed, but we modify the exclusions to conform with the general criteria for public health objectives and in response to comments.

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT 45 CFR 170.314(f)(5) and (f)(6).

• *Exclusions:* Any EP that meets at least 1 of the following criteria may be excluded from this objective: (1) The EP does not diagnose or directly treat any disease associated with a specialized registry sponsored by a national specialty society for which the EP is eligible, or the public health agencies in their jurisdiction; (2) the EP operates in a jurisdiction for which no specialized registry sponsored by a public health agency or by a national specialty society for which the EP is eligible is capable of receiving electronic specific case information in the specific standards required by CEHRT at the beginning of their EHR reporting period; (3) the EP operates in a jurisdiction where no public health agency or national specialty society for which the EP is eligible provides information timely on capability to receive information into their specialized registries ; or (4) the EP

operates in a jurisdiction for which no specialized registry sponsored by a public health agency or by a national specialty society for which the EP is eligible that is capable of receiving electronic specific case information in the specific standards required by CEHRT at the beginning of their EHR reporting period can enroll additional EPs.

Proposed EP Objective: Use secure electronic messaging to communicate with patients on relevant health information.

In the proposed rule, we outlined the following benefits of using secure electronic messaging to communicate with patients: Electronic messaging (for example, email) is one of the most widespread methods of communication for both businesses and individuals. The inability to communicate through electronic messaging may hinder the provider-patient relationship. Electronic messaging is very inexpensive on a transactional basis and allows for communication even when the provider and patient are not available at the same moment in time. The use of common email services and the security measures that may be used when they are sent may not be appropriate for the exchange of protected health information. Therefore, the exchange of health information through electronic messaging requires additional security measures while maintaining its ease of use for communication. While email with the necessary safeguards is probably the most widely used method of electronic messaging, for the purposes of meeting this objective, secure electronic messaging could also occur through functionalities of patient portals, PHRs, or other stand-alone secure messaging applications.

We proposed this as a core objective for EPs for Stage 2. The additional time made available for Stage 2 implementation made possible the inclusion of some new objectives in the core set as proposed in the proposed rule. We chose to identify objectives that address critical priorities of the country's National Quality Strategy (NQS) (*http://www.healthcare.gov/law/resources/reports/quality03212011a.html*), with a focus on one for EPs and one for hospitals.

For EPs, secure electronic messaging is critically important to two NQS priorities—

- Ensuring that each person/family is engaged as partners in their care; and
- Promoting effective communication and coordination of care.

Secure messaging could make care more affordable by using more efficient communication vehicles when appropriate. Specifically, research demonstrates that secure messaging has been shown to improve patient adherence to treatment plans, which reduces readmission rates. Secure messaging has also been shown to increase patient satisfaction with their care. Secure messaging has been named as one of the top ranked features according to patients. Also, despite some trepidation, providers have seen a reduction in time responding to inquires and less time spent on the phone. We specifically sought comment on whether there may be special concerns with this objective in regards to behavioral health.

Comment: Some commenters noted that patient engagement and enhanced patient-provider communications facilitated by an EHR are important goals, and secure messaging between EPs and patients is an appropriate objective to consider for Meaningful Use criteria.

Response: We appreciate the commenters support of this objective and agree that electronic patient-provider communication is important to improving the overall quality of patient care.

Comment: Some commenters suggested that this objective should be part of the menu set instead of a core objective for Stage 2. This would permit EPs who do not believe they can meet the measure at this time to select different objectives.

Response: As we noted in the proposed rule, we placed this objective in the core because we believe it addresses critical priorities of the country's National Quality Strategy (NQS) (*http://www.healthcare.gov/law/resources/reports/quality03212011a.html*): Ensuring that each person/family is engaged as partners in their care; and promoting effective communication and coordination of care. We also believe that secure messaging could make care more affordable by using more efficient communication vehicles when appropriate. Specifically, research demonstrates that secure messaging has been shown to improve patient adherence to treatment plans, which reduces readmission rates (see Rosenberg SN, Shnaiden TL, Wegh AA, Juster IA (2008) ''Supporting the patient's role in guideline compliance: a controlled study'' American Journal of Managed Care 14(11):737–44; Gustafson DH, Hawkins R, Boberg E, Pingree S, Serlin RE, Graziano F, Chan CL (1999) ''Impact of a patient-centered, computer-based health information/support system'' American Journal of Preventive Medicine 16(1):1–9). Secure messaging has also been shown to increase patient satisfaction with their care (see Ralston JD, Carrell D, Reid R, Anderson M, Moran M, Hereford J (2007) ''Patient Web services integrated with a shared medical record: patient use and satisfaction'' Journal of the American Medical Informatics Association 14(6):798–806). Therefore, we are leaving this as a core objective for EPs for Stage 2.

Comment: Several commenters responded to our question about whether there were special concerns about implementing this objective for behavioral health patients. These commenters indicated that they did not believe this objective posed a special concern and that it would help behavioral health patients obtain needed support from clinicians.

Response: We appreciate the feedback from commenters regarding behavioral health.

After consideration of the public comments, we are finalizing the meaningful use objective for EPs at § 495.6(j)(17)(i) as proposed.

Proposed EP Measure: A secure message was sent using the electronic messaging function of CEHRT by more than 10 percent of unique patients seen by the EP during the EHR reporting period.

Comment: Many commenters voiced objections to the measure of this objective and the concept of providers being held accountable for patient actions. The commenters believed that while providers could be held accountable for making electronic messaging capabilities available to patients and encouraging patients to use electronic messaging, they could not control whether patients actually utilized electronic messaging. However, some commenters believed that the measure was a reasonable and necessary step to require vendors to make electronic messaging tools more widely available and for providers to incorporate electronic messaging into clinical practice. In addition, commenters pointed to the unique role that providers can play in encouraging and facilitating their patients' and their families' use of secure messaging.

Response: While we recognize that EPs cannot directly control whether patients use electronic messaging, we continue to believe that EPs are in a unique position to strongly influence the technologies patients use to improve their own care, including secure electronic messaging. We believe that EPs' ability to influence patients coupled with the low threshold make this measure achievable for all EPs.

Comment: Other commenters did not object to the principle of providers

being held accountable for patient actions but noted that the potential barriers of limited internet access, computer access, and electronic messaging platforms for certain populations (for example, rural, elderly, lower income, visually impaired, non-English-speaking, etc.) might make the measure impossible to meet for some providers. Commenters suggested a number of possible solutions to allow providers to overcome these barriers: granting exclusions for certain patient populations, lowering the proposed threshold of the measure, or eliminating the percentage threshold of the measure.

Response: We recognize that certain patient populations face greater challenges in utilizing electronic messaging. We address the potential barrier of limited internet access in the comment regarding a broadband exclusion below. While we agree that excluding certain patient populations from this requirement would make the measure easier for EPs to achieve, we do not know of any reliable method to quantify these populations for each EP in such a way that we could standardize exclusions for each population. In addition, we are concerned that blanket exclusions for certain disadvantaged populations could serve to extend existing disparities in electronic access to health information. We also decline to eliminate the percentage threshold of this measure because we do not believe that a simple yes/no attestation for implementation of electronic messaging is adequate to encourage a minimum level of patient usage. However, in considering the potential barriers faced by these patient populations, we agree that it would be appropriate to lower the proposed threshold of this measure to more than 5 percent of unique patients sending an electronic message. We believe that this lower threshold, combined with the broadband exclusion detailed in the response below, will allow all EPs to meet the measure of this objective.

Comment: Several commenters suggested that the exclusion for FCC-recognized areas with under 50 percent broadband availability, which was proposed in the objective to ''Provide patients the ability to view online, download, and transmit their health information,'' should be extended to the electronic messaging objective.

Response: We agree that the infrastructure required for electronic messaging is similar to the infrastructure required for successful usage of an online patient portal as described in the objective to ''Provide patients the ability to view online, download, and transmit their health information.'' Therefore, we believe an exclusion to this measure based on the availability of broadband is appropriate and are finalizing the exclusion in the language below. We note that since publication of our proposed rule the Web site has changed to *www.broadbandmap.gov* and the speed used has changed from 4Mbps to 3Mbps. We updated our exclusion.

Comment: Some commenters expressed concern about including all patients seen by the EP in the denominator and suggested limiting the denominator instead to patients who have indicated secure electronic messaging as their communication preference. Other commenters suggested the denominator should not be limited to patients seen by the EP and should also include patients who make inquiries or who attempt to make an appointment with the EP during the reporting period.

Response: We do not agree that limiting the denominator to patients who have indicated secure electronic messaging as their communication preference is appropriate. The purpose of the measure is for EPs to promote wider use of electronic messaging as a regular communication vehicle for their patients, and we are concerned that limiting the denominator in the manner suggested would not lead to an increase in the promotion or usage of electronic messaging as an important communication vehicle between patients and providers. We also do not agree that expanding the denominator to patients not seen by the EP during the reporting period is appropriate. Another purpose of the measure is for secure messaging to include clinically relevant information, and we do not believe that patients seeking introductory information or making an appointment are likely to include clinically relevant information in secure messaging.

Comment: Some commenters noted that patients whose only office visit with an EP occurs near the end of the reporting period might not be able to send an electronic message in time to be included in the numerator of the measure.

Response: While we agree that patients with a single office visit near the end of the reporting period may not utilize electronic messaging and be eligible for inclusion in the numerator of the measure during the EHR reporting period, we believe that the threshold of this measure will be sufficiently low to permit EPs to meet the measure even without the participation of these patients.

Comment: Several commenters requested clarification on the definition of a secure message.

Response: We define a secure message as any electronic communication between a provider and patient that ensures only those parties can access the communication. This electronic message could be email or the electronic messaging function of a PHR, an online patient portal, or any other electronic means. However, we note that the secure message also must use the electronic messaging function of CEHRT in order to qualify for the measure of this objective.

Comment: Some commenters suggested that EPs or patients should be permitted to use an electronic messaging function that is not part of CEHRT in order to meet the measure.

Response: We believe that allowing patients to use multiple electronic messaging functions in order to communicate with the provider under this measure could create confusion for the EP and potentially lead to electronic messages that are missed or not responded to. We also believe that by encouraging patients to use the electronic messaging function that is part of CEHRT EPs can better ensure that electronic messages are sent securely to protect patient's health information. Finally, we are concerned that CEHRT would not be able to track electronic messaging that is not part of the EHR, which would place an extra burden for reporting on EPs in meeting this measure. For all of these reasons, we require that patients use the electronic messaging function that is part of CEHRT in order to be included in the measure of this objective.

Comment: Commenters agreed with our decision not to include in the definition for this measure ''relevant health information.'' Commenters did not believe CEHRT could support the categorization of electronic messages in a way that would satisfy such a requirement.

Response: We appreciate the support offered by commenters. As we stated in the proposed rule, the secure messages sent should contain relevant health information specific to the patient in order to meet the measure of this objective. We believe the EP is the best judge of what health information should be considered relevant in this context. We do not specifically include the term ''relevant health information'' in the measure because we believe the provider is best equipped to determine whether such information is included. We agree that it would be too great a burden for CEHRT to determine whether

the information in the secure message has such information.

Comment: Some commenters expressed concerns that we did not propose to measure provider response to patient electronic messaging. These commenters believed that the proposed measure places too much focus on patient messaging and should instead focus on communication between patient and provider. Some commenters suggested that the measure be modified for responsiveness of an EP or staff to patient messaging rather than the proposed percentage of patients who send a secure message.

Response: As we stated in the proposed rule, there is an expectation that the EP would respond to electronic messages sent by the patient, although we do not specify the method of response or require the EP to document his or her response for this measure. We decline to specify the method of provider response because we believe it is best left to the provider's clinical judgment to decide the course of action which should be taken in response to the patient's electronic message. An EP or staff member could decide that a follow-up telephone call or office visit is more appropriate to address the concerns raised in the electronic message. Therefore, we decline to alter the measure to include provider response.

Comment: Commenters asked for clarification as to whether the EP had to respond personally to electronic messaging or whether members of the EP's staff could respond. Commenters also asked for clarification regarding whether or not messages sent by a patient-authorized representative would be recorded in this measure.

Response: There is not an expectation that the EP must personally respond to electronic messages to the patient. Just as an EP's staff respond to telephone inquiries or conduct office visits on behalf of the EP, staff could also respond to electronic messages from the patient. We also intend for electronic messages sent by a patient-authorized representative to be included in the measure of this objective and have modified the language of the measure below accordingly.

Comment: Some commenters raised concerns regarding the security of electronic messaging, specifically citing instances where family members might have access to the patient's account or elderly patients who would not know how to use a computer and would have to give account access to a caregiver. Other commenters raised concerns regarding their liability in providing access to such information or in responding to an electronic message.

Response: We do not believe that secure electronic messaging poses greater risks to exposure of protected health information than other mediums such as telephone messaging, paper records, etc. In some cases secure electronic messaging can provide even greater protection of health information. We note that many patients grant access to health information to family members and caregivers to facilitate care, and we expect the same access to continue with secure electronic messaging. Nor do we believe that secure electronic messaging exposes providers to greater liability (for example, in areas of privacy protection or malpractice) than other mediums such as telephone, mail, paper records, etc. Previous research has demonstrated that better patient-provider communication reduces the likelihood of malpractice claims being filed.

Comment: Some commenters noted that the potential financial burden of implementing securing messaging as a part of their clinical or administrative workflow. These commenters noted that EPs are not reimbursed for the time spent responding to electronic messages and that it can be time consuming for an EP to have multiple exchanges with a patient via email.

Response: We do not believe that implementing electronic messaging imposes a significant burden on providers. While we note that in some scenarios it may be possible for an EP to receive reimbursement from private insurance payers for online messaging, we acknowledge that EPs are generally not reimbursed for time spent responding to electronic messaging. However, it is also true that EPs are generally not reimbursed for other widely used methods of communication with patients (for example, telephone). As we noted in the proposed rule, many providers have seen a reduction in time responding to inquires and less time spent on the phone through the use of electronic messaging. In addition, we note that EPs themselves do not have to respond to electronic messages personally and can delegate this task to staff, just as many EPs currently delegate telephone exchanges with patients to staff.

After consideration of the public comments, we are finalizing the meaningful use measure for EPs as ''A secure message was sent using the electronic messaging function of CEHRT by more than 5 percent of unique patients (or their authorized representatives) seen by the EP during the EHR reporting period'' at § 495.6(j)(17)(ii) and the exclusion for EPs as ''Any EP who has no office visits during the EHR reporting period, or any EP who conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period'' at § 495.6(j)(17)(iii).

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(e)(3).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients seen by the EP during the EHR reporting period.
- *Numerator:* The number of patients or patient-authorized representatives in the denominator who send a secure electronic message to the EP that is received using the electronic messaging function of CEHRT during the EHR reporting period.
- *Threshold:* The resulting percentage must be more than 5 percent in order for an EP to meet this measure.
- *Exclusion:* Any EP who has no office visits during the EHR reporting period, or any EP who conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period.

Proposed Eligible Hospital/CAH Objective: Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).

In the proposed rule, we outlined the following benefits of automatically tracking medications with eMAR: eMAR increases the accuracy of medication administration thereby increasing both patient safety and efficiency. The HIT Policy Committee has recommended the inclusion of this objective for hospitals in Stage 2, and we proposed this as a core objective for eligible hospitals and CAHs. The additional time made available for Stage 2 implementation makes possible the inclusion of some new objectives in the core set. eMAR is critically important to making care safer by reducing medication errors which may make care more affordable. eMAR has been shown to lead to significant improvements in medication-related adverse events within hospitals with associated decreases in cost. eMAR cuts

in half the adverse drug event (ADE) rates for non-timing medication errors, according to a study published in the *New England Journal of Medicine* (Poon et al., 2010, Effect of Bar-Code Technology on the Safety of Medication Administration *http://www.nejm.org/doi/abs/10.1056/NEJMsa0907115?query=NC*). A study done to evaluate cost-benefit of eMAR (Maviglia et al., 2007, Cost-Benefit Analysis of a Hospital Pharmacy Bar Code Solution *http://archinte.ama-assn.org/cgi/content/full/167/8/788*) demonstrated that associated ADE cost savings allowed hospitals to break even after 1 year and begin reaping cost savings going forward.

We proposed to define eMAR as technology that automatically documents the administration of medication into CEHRT using electronic tracking sensors (for example, radio frequency identification (RFID)) or electronically readable tagging such as bar coding). The specific characteristics of eMAR for the EHR Incentive Programs will be further described in the ONC standards and certification criteria final rule published elsewhere in this issue of the **Federal Register**.

By its very definition, eMAR occurs at the point of care so we did not propose additional qualifications on when it must be used or who must use it.

Comment: Some commenters suggested that this should be a menu objective for Stage 2.

Response: As we stated in the proposed rule, we believe that eMAR is critically important to making care safer by reducing medication errors which may also make care more affordable. eMAR has been shown to lead to significant improvements in medication-related adverse events within hospitals with associated decreases in cost. Therefore, we believe that the benefits to patient safety from eMAR warrant the inclusion of this as a Stage 2 core objective for eligible hospitals and CAHs.

After consideration of the public comments, we are finalizing the meaningful use objective for eligible hospitals and CAHs at § 495.6(l)(16)(i) as proposed.

Proposed Eligible Hospital/CAH Measure: More than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are tracked using eMAR.

Comment: A number of commenters questioned whether the measure should apply to at least one instance of the administration of a dose connected with a medication order or whether each individual dose connected with a medication order should be included in the measure. Some commenters believed that a single instance of administration of a dose should constitute fulfillment of the measure, while others believed that all doses administered rather than orders administered would be a more precise and meaningful measurement.

Response: We believe that including each individual dose connected with a medication order through this measure could yield denominators that are very large. However, we believe that the benefits to patient safety from eMAR are seen when all doses of a medication order are tracked. Therefore, we clarify that we include in the numerator of this objective medication orders for which all doses are tracked using eMAR, and we are amending the measure language below to reflect this clarification. If a medication is ordered but not all doses of the medication are tracked using eMAR, then that order may not be included in the numerator of the measure.

Comment: Some commenters raised the concern that certain rural and low volume hospitals might face undue financial burden in implementing this objective and proposed an exclusion for hospitals with either a limited number of inpatient beds or a low average inpatient volume. Some commenters suggested there should be an exclusion for very small hospitals for whom eMAR could be a prohibitively expensive undertaking. Other commenters noted that the difficulties in implementing eMAR were outweighed by the significant benefits to patient safety.

Response: We agree with commenters who suggested that the potential benefits to patient safety of eMAR are significant. While we agree that certain hospitals may face challenges in implementing eMAR on a wider scale, we believe that the low threshold for this measure lessens the burden associated with implementation of eMAR for most rural and low volume hospitals. We also note that CEHRT will include eMAR capabilities, so the primary barrier to implementation for most hospitals will be workflow.

However, we are also concerned that very small hospitals may have local technical support and training issues that may make an automated eMAR solution actually less effective than other approaches. We also believe that very small hospitals will have fewer health care professionals involved in the process of medication administration and fewer patients for whom duplicative orders could present an issue, which would also make an eMAR solution less effective. Therefore, we believe these hospitals would not benefit from eMAR as much as larger facilities and are finalizing an exclusion for these hospitals. Any hospital with an average daily inpatient census of fewer than 10 patients may be excluded from meeting the measure of this objective. For purposes of this exclusion, we define an average daily inpatient census as the total number of patients admitted during the previous calendar year divided by 365 (or 366 if the previous calendar year is a leap year).

Comment: Some commenters stated that the percentage threshold of this measure should be replaced with the implementation of eMAR in one ward or unit of the hospital to limit burdensome measurement requirements. Other commenters argued that changing the measure to one ward or unit of the hospital would introduce ambiguity regarding what constitutes a ward or unit, while a percentage threshold would allow hospitals the flexibility to implement eMAR capabilities on a limited basis.

Response: We believe that the low threshold of this objective does not impose burdensome measurement requirements on hospitals, especially since we do not anticipate a significant difference in the way CEHRT will measure eMAR usage regardless of where it is implemented. We agree that limiting the measure to implementation in a single ward or unit could introduce ambiguity regarding the precise definition of ward or unit, especially since some hospitals combine the locations and workflows of certain units. We further note that the percentage threshold does allow hospitals to implement eMAR in a limited capacity, and that a hospital could potentially meet the low measure of this objective by implementing in a single ward or unit or by implementing in several smaller wards or units that combine to yield more than 10 percent of medication orders created during the EHR reporting period. We believe the percentage measure of this objective yields maximum flexibility for a hospital to implement eMAR in a way that is clinically relevant to its individual workflow.

Comment: Some commenters requested clarification on whether eMAR could be implemented solely in portions of an inpatient department or solely in portions of an emergency department in order to meet the measure, as opposed to implementing eMAR in both the inpatient and emergency departments.

Response: As stated previously, we have attempted to provide maximum flexibility for a hospital to implement eMAR in a way that is clinically relevant to its individual workflow. Therefore, we do not require that eMAR is implemented in both inpatient and emergency departments in order to meet this measure, only that more than 10 percent of medication orders created by authorized providers of either the inpatient or emergency department (POS 21 or 23) during the EHR reporting period are tracked using eMAR. Hospitals could implement eMAR in the inpatient department, the emergency department, or both departments in order to meet the threshold of this measure.

After consideration of the public comments, we modify the meaningful use measure as ''More than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR'' for eligible hospitals and CAHs at § 495.6(l)(16)(ii) and finalize the exclusion as ''Any eligible hospital or CAH with an average daily inpatient census of fewer than 10 patients'' at § 495.6(l)(16)(iii).

We further specify that in order to meet this objective and measure, an eligible hospital or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(16).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of medication orders created by authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of orders in the denominator for which all doses are tracked using eMAR.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an eligible hospital or CAH to meet this measure.
- *Exclusion:* Any hospital with an average daily inpatient census of fewer than ten (10) patients.

Proposed Eligible Hospital/CAH Objective: Generate and transmit permissible discharge prescriptions electronically (eRx)

In the proposed rule, we outlined the following benefits of electronic prescribing: The use of electronic prescribing has several advantages over having the patient carry the prescription to the pharmacy or directly faxing a handwritten or typewritten prescription to the pharmacy. When the hospital generates the prescription electronically, CEHRT can recognize the information and can provide decision support to promote safety and quality in the form of adverse interactions and other treatment possibilities. The CEHRT can also provide decision support that promotes the efficiency of the health care system by alerting the EP to generic alternatives or to alternatives favored by the patient's insurance plan that are equally effective. Transmitting the prescription electronically promotes efficiency and safety through reduced communication errors. It also allows the pharmacy or a third party to automatically compare the medication order to others they have received for the patient. This comparison allows for many of the same decision support functions enabled at the generation of the prescription, but bases them on potentially greater information.

We have combined the comments and responses for this objective with the measure below. After consideration of the public comments, we are finalizing the meaningful use objective for eligible hospitals and CAHs at § 495.6(m)(4)(i) as proposed.

Proposed Eligible Hospital/CAH Measure: More than 10 percent of hospital discharge medication orders for permissible prescriptions (for new or changed prescriptions) are compared to at least one drug formulary and transmitted electronically using CEHRT.

Comment: Most commenters voiced support for this as a menu set item, with some commenters noting that the threshold for this measure should remain low for Stage 2 because of the difficulty of using electronic prescribing for all prescriptions, including controlled substances.

Response: We appreciate the support for this objective, and we note that the measure of the objective for eligible hospitals and CAHs for Stage 2 is set at more than 10 percent of all discharge medication orders for permissible prescriptions. We believe this sets a sufficiently low threshold that would allow most hospitals to achieve this measure and eliminates the inclusion of controlled substances, which are not included as permissible prescriptions for the purposes of this measure.

Comment: Most commenters noted that distinguishing new and altered prescriptions from refills would be unnecessarily burdensome for hospitals.

Response: Although we had initially proposed to limit this measure to only new and altered prescriptions because we believed that hospitals would not issue refill prescriptions, we agree with the commenters that distinguishing refills from new and altered prescriptions could be unnecessarily burdensome for hospitals. Therefore, we are not imposing this limitation and include new, altered, and refill prescriptions in the measure of discharge medication orders for permissible prescriptions.

Comment: Some commenters expressed concerns about patient requests for paper prescriptions instead of electronic prescriptions.

Response: We believe that the more than 10 percent of discharge medication orders threshold is sufficiently low to accommodate patient requests for paper prescriptions and still allow most, if not all, hospitals to meet the measure of this objective.

Comment: Some commenters asked whether prescriptions electronically transmitted to in-house pharmacies should be included in the measure and if the standards specified by ONC for this measure would apply to these transmissions.

Response: We are continuing the policy from Stage 1 that prescriptions transmitted electronically within an organization (the same legal entity) would be counted in the measure and would not need to use the standards specified by ONC for this objective. However, a hospital's CEHRT must meet all applicable certification criteria and be certified as having the capability of meeting external transmission requirements. In addition, the EHR that is used to transmit prescriptions within the organization would need to be CEHRT.

The hospital would include in the numerator and denominator both types of electronic transmission (those within and outside the organization) for the measure of this objective. We further clarify that for purposes of counting discharge prescriptions ''generated and transmitted electronically,'' we considered the generation and transmission of prescriptions to occur simultaneously if the prescriber and dispenser are the same person and/or are accessing the same record in an integrated EHR to create an order in a system that is electronically transmitted to an internal pharmacy.

Comment: Some commenters asked for clarification regarding whether drug-formulary checks had to be enabled for the entire EHR reporting period, as required by the Stage 1 measure.

Response: No. The Stage 1 objective for drug-formulary checks has been combined with this Stage 2 objective for generating and transmitting permissible discharge prescriptions electronically. Although the measure of the Stage 1 objective required the capability for

drug-formulary checks to be enabled for the entire reporting period, the measure of the Stage 2 objective specifies drug-formulary checks should be performed for more than 10 percent of hospital discharge medication orders for permissible prescriptions. We recognize that not every patient will have a formulary that is relevant for him or her. Therefore, we require not that the EHR check each prescription against a formulary relevant for a given patient, but rather that the EHR check each prescription for the existence of a relevant formulary. If a relevant formulary is available, then the information can be provided. We believe that this initial check is essentially an on or off function for the EHR and should not add to the measurement burden. Therefore, with this clarification of the check we are referring to, we are finalizing the drug formulary check as a component of this measure. We look forward to the day when a relevant formulary is available for every patient. We modified the measure to use the word query instead of compare.

Comment: Some commenters asked whether the measure of this objective applied to inpatient departments, emergency departments, or both.

Response: We specify that the measure of this objective applies to medication orders for patients discharged from either the inpatient (POS 21) department, the emergency department, or both the inpatient and emergency departments of an eligible hospital or CAH during the EHR reporting period.

Comment: One commenter asked for clarification of whether a patient for whom no relevant drug formularies are available could be counted in the numerator of the measure if the discharge prescription for that patient is generated and transmitted electronically. Another commenter suggested that patients for whom no relevant formularies are available should not be counted in the measure.

Response: As noted in the proposed rule, we believe that the inclusion of the comparison to at least one drug formulary enhances the efficiency of the healthcare system when clinically appropriate and cheaper alternatives may be available. In the event that a relevant formulary is unavailable for a particular patient and medication combination, a discharge prescription that is generated and electronically transmitted should still be included in the numerator of the measure. We do not agree that prescriptions for patients for whom relevant formularies are unavailable should be excluded from this measure.

Comment: Several commenters believed that the exclusion based on the availability of a pharmacy capable of receiving electronic prescriptions within 25 miles of the hospital's location was not adequate for all areas, particularly rural areas. Some commenters suggested that 10 miles is a more appropriate distance.

Response: We appreciate the commenters' concerns about this exclusion. As stated in the proposed rule, we recognize that certain areas may not have widespread availability of electronic prescribing in all pharmacies, we believe that most hospitals will be able to fulfill electronic prescriptions through an internal pharmacy. However, we agree with commenters that basing the exclusion on a 25-mile radius could place a significant burden on patients to travel to fill prescriptions, especially in rural areas. Therefore, we are finalizing a 10-mile radius at the start of the EHR reporting period. Hospitals that do not have an internal pharmacy and that are located 10 miles from a pharmacy that can receive electronic prescriptions at the start of the EHR reporting period would be able to claim the exclusion for this measure. We also believe that the low threshold of more than 10 percent of discharge prescriptions transmitted electronically would make it possible for all hospitals to meet this measure.

Comment: Some commenters requested for clarification of whether CEHRT would provide the capability to determine the availability of a pharmacy capable of receiving electronic prescriptions within 25 miles of the hospital's location.

Response: CEHRT will not provide the capability to determine whether a hospital meets the exclusion for this measure. As stated in the previous response, we are finalizing the exclusion for the availability of a pharmacy capable of receiving electronic prescriptions within 10 miles of the hospital's location. Therefore, eligible hospitals and CAHs may use their own resources to make a determination regarding the availability of a pharmacy capable of receiving electronic prescriptions within 10 miles of the hospital's location.

After consideration of the public comments, we modify the meaningful use measure for eligible hospitals and CAHs as ''More than 10 percent of hospital discharge medication orders for permissible prescriptions (for new, changed, and refilled prescriptions) are queried for a drug formulary and transmitted electronically using CEHRT'' at § 495.6(m)(4)(ii) and we modify the exclusion for eligible hospitals and CAHs at § 495.6(m)(4)(iii) by changing the radius from 25 miles to 10 miles.

We further specify that in order to meet this objective and measure, an eligible hospital or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(10) and (b)(3).

To calculate the percentage, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of new, changed, or refill prescriptions written for drugs requiring a prescription in order to be dispensed other than controlled substances for patients discharged during the EHR reporting period.
- *Numerator:* The number of prescriptions in the denominator generated, queried for a drug formulary and transmitted electronically.
- *Threshold:* The resulting percentage must be more than 10 percent in order for an eligible hospital or CAH to meet this measure.
- *Exclusion:* Any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions and is not located within 10 miles of any pharmacy that accepts electronic prescriptions at the start of their EHR reporting period.

Proposed Eligible Hospital/CAH Objective: Provide patients the ability to view online, download, and transmit information about a hospital admission.

In the proposed rule, we noted that studies have found that patients engaged with computer based information sources and decision support show improvement in quality of life indicators, patient satisfaction and health outcomes. (Ralston, Carrell, Reid, Anderson, Moran, & Hereford, 2007) (Gustafson, Hawkins, Bober, S, Graziano, & CL, 1999) (Riggio, Sorokin, Moxey, Mather, Gould, & Kane, 2009) (Gustafson, et al., 2001). In addition, we noted that this objective aligns with the FIPPs,[5] in affording baseline privacy protections to individuals. We stated that we believe this information is integral to the Partnership for Patents initiative and reducing hospital readmissions. While this objective does not require all of the information sources and decision support used in these studies, having a set of basic information available advances these initiatives. The ability to have this information online means it is always retrievable by the patient, while the download function ensures that the patient can take the information with them when secure internet access is not

[5] Ibid.

available. However, providers should be aware that while meaningful use is limited to the capabilities of CEHRT to provide online access, there may be patients who cannot access their EHRs electronically because of their disability. Additionally, other health information may not be accessible. Finally, we noted that providers who are covered by civil rights laws must provide individuals with disabilities equal access to information and appropriate auxiliary aids and services as provided in the applicable statutes and regulations.

We proposed this as a core objective for hospitals for Stage 2. We also specified in the proposed rule the information that must be made available as part of the objective, although we noted hospitals could choose to provide additional information (77 FR 13730).

Comment: Some commenters suggested that this objective should be part of the menu set instead of a core objective for Stage 2. This would permit eligible hospitals and CAHs that do not believe they can meet the measure at this time to select different objectives.

Response: We do not agree that this objective should be part of the menu set. We proposed this objective as part of the core for eligible hospitals and CAHs because it is intended to replace the previous Stage 1 core objective of ''Provide patients with an electronic copy of their health information upon request'' and the Stage 1 core objective of ''Provide patients with an electronic copy of their discharge information.'' Although CEHRT will provide added capabilities for this objective, we do not believe the objective itself is sufficiently different from previous objectives to justify placing it in the menu set. Also, we believe that patient access to their discharge information is a high priority for the EHR Incentive Programs and this objective best provides that access in a timely manner.

Comment: Some commenters expressed the opinion that this objective should not be included as part of meaningful use and was more appropriately regulated under HIPAA and through the Office for Civil Rights.

Response: We do not agree that this objective should not be included in meaningful use. Although we recognize that many issues concerning the privacy and security of information online are subject to HIPAA requirements, we believe that establishing an objective to provide online access to health information is within the regulatory purview of the EHR Incentive Programs and consistent with the statutory requirements of meaningful use.

After consideration of the public comments, we are finalizing the meaningful use objective for eligible hospitals and CAHs at § 495.6(l)(8)(i) as proposed.

Proposed Eligible Hospital/CAH Measure: There are 2 measures for this objective, both of which must be satisfied in order to meet the objective.

More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge.

More than 10 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the EHR reporting period.

Comment: A commenter questioned how long data should be made available online before it can be removed.

Response: It is the goal of this objective to make available to the patient both current and historical health information regarding hospital discharges. Therefore, we would anticipate that the data should be available online on an ongoing basis. However, an eligible hospital or CAH may withhold or remove information from online access for purposes of meaningful use if they believe substantial harm may arise from its disclosure online.

Comment: Some commenters asked for clarification on whether online access had to be made available using CEHRT or if the information could be made available through other means (patient portal, PHR, etc.).

Response: Both of the measures for this objective must be met using CEHRT. Therefore, for the purposes of meeting this objective, the capabilities provided by a patient portal, PHR, or any other means of online access and that would permit a patient or authorized representative to view, download, or transmit their personal health information would have to be certified in accordance with the certification requirements adopted by ONC. We refer readers to ONC's standards and certification criteria final rule that is published elsewhere in this issue of the **Federal Register**.

Comment: Some commenters asked for clarification on how access by the patient is defined.

Response: We define access as having been given when the patient possesses all of the necessary information needed to view, download, or transmit their discharge information. This could include providing patients with instructions on how to access their health information, the Web site address they must visit for online access, a unique and registered username or password, instructions on how to create a login, or any other instructions, tools, or materials that patients need in order to view, download, or transmit their discharge information.

Comment: Some commenters suggested that patients under the age of 18 should not have the same access to the same information to which adult patients have access and requested a separate list of required elements for patients under the age of 18.

Response: An eligible hospital or CAH may decide that online access is not the appropriate forum for certain health information for patients under the age of 18. Within the confines of the laws governing guardian access to medical records for patients under the age of 18, we would defer to the eligible hospital's or CAH's judgment regarding which information should be withheld for such patients. In lieu of providing online access to patients under the age of 18, eligible hospitals or CAHs could provide online access to guardians for patients under the age of 18, in accordance with state and local laws, in order to meet the measure of this objective. Providing online access to guardians in accordance to state and local laws would be treated the same as access for patients, and guardians could then be counted in the numerator of the measure. We recognize that state and local laws may restrict the information that can be made available to guardians, and in these cases such information can be withheld and the patient could still be counted in the numerator of the measure.

Comment: Many commenters voiced objections to the second measure of this objective and the concept of providers being held accountable for patient actions. The commenters believed that while providers could be held accountable for making information available online to patients, providers could not control whether patients actually accessed their information. Many commenters also noted that the potential barriers of limited internet access, computer access, and patient engagement with health IT for certain populations (for example, rural, elderly, lower income, non-English-speaking, etc.) might make the measure impossible to meet for some providers. There were also a number of comments stating that metrics used to track views or downloads can be misleading and are not necessarily the most accurate measure of patient usage. Commenters suggested a number of possible solutions to allow providers to overcome these barriers, including

eliminating the percentage threshold of the measure or requiring providers to offer and track patient access but not requiring them to meet a percentage measure in order to demonstrate meaningful use. However, some commenters believed that the measure was a reasonable and necessary step to ensure that providers had accountability for engagement of their patients in use of electronic health information and integration of it into clinical practice. In addition, commenters pointed to the unique role that providers can play in encouraging and facilitating their patients' and their families' use of online tools.

Response: While we recognize that eligible hospitals and CAHs cannot directly control whether patients access their health information online, we continue to believe that eligible hospitals and CAHs are in a unique position to strongly influence the technologies patients use to improve their own care, including viewing, downloading, and transmitting their health information online. We believe that the eligible hospital's or CAH's ability to influence patients coupled with the low threshold of more than 10 percent of patients who view online, download, or transmit to a third party their information make this measure achievable for all eligible hospitals and CAHs.

We recognize that certain patient populations face greater challenges in online access to information. We address the potential barrier of limited internet access in the comment regarding a broadband exclusion below. We address the potential barrier to individuals with disabilities through ONC's rules requiring that EHRs meet disability accessibility standards. While we agree that excluding certain patient populations from this requirement would make the measure easier for eligible hospitals and CAHs to achieve, we do not know of any reliable method to quantify these populations for each eligible hospital and CAH in such a way that we could standardize exclusions for each population. We also decline to eliminate the percentage threshold of this measure because we do not believe that a simple yes/no attestation for this objective is adequate to encourage a minimum level of patient usage. However, in considering the potential barriers faced by these patient populations, we agree that it would be appropriate to lower the proposed threshold of this measure to more than 5 percent of unique patients who view online, download, or transmit to a third party their information. In addition, we are concerned that blanket exclusions for certain disadvantaged populations could serve to extend existing disparities in electronic access to information and violate civil rights laws. All entities receiving funds under this program are subject to civil rights laws. For more information about these laws and their requirements (see *http://www.hhs.gov/ocr/civilrights/index.html*). We believe that this lower threshold, combined with the broadband exclusion detailed in the response later in this section, will allow all eligible hospitals and CAHs to meet the measure of this objective.

Comment: Some commenters suggested making the numerator and denominator language for this measure consistent with the language used for this measure for EPs.

Response: We agree that there are some slight variations in language between the measure for EPs and the measure for hospitals. To the extent possible, we have harmonized the language between both.

Comment: Some commenters asked for clarification on how view is defined.

Response: We define view as the patient (or authorized representative) accessing their health information online.

Comment: Some commenters noted that the potential financial burden of implementing an online patient portal to provide patients online access to discharge information. These commenters noted the added time burden for staff in handling the additional patient use of online resources, which may increase costs through the hiring of additional staff, as well as the need to modify their existing workflow to accommodate potential online messages from patients. Some commenters also believed that there would be an additional cost for sharing content before standards exist for content types and formats.

Response: As noted in the proposed rule, studies have found that patients engaged with computer based information sources and decision support show improvement in quality of life indicators, patient satisfaction and health outcomes (see Rosenberg SN, Shnaiden TL, Wegh AA, Juster IA (2008) ''Supporting the patient's role in guideline compliance: a controlled study'' American Journal of Managed Care 14(11):737–44; Gustafson DH, Hawkins R, Boberg E, Pingree S, Serlin RE, Graziano F, Chan CL (1999) ''Impact of a patient-centered, computer-based health information/support system'' American Journal of Preventive Medicine 16(1):1–9; Ralston JD, Carrell D, Reid R, Anderson M, Moran M, Hereford J (2007) ''Patient web services integrated with a shared medical record: patient use and satisfaction'' Journal of the American Medical Informatics Association 14(6):798–806). We believe that the information provided as part of this measure is integral to the Partnership for Patents initiative and reducing hospital readmissions. We do not believe that implementing online access for patients imposes a significant burden, financial or otherwise, on providers. While we note that in some scenarios it may be possible for an eligible hospital or CAH to receive reimbursement from private insurance payers for online messaging, we acknowledge that eligible hospitals and CAHs are generally not reimbursed for time spent responding to electronic messaging. However, it is also true that eligible hospitals and CAHs are generally not reimbursed for other widely used methods of communication with patients (for example, telephone). In addition, it will be part of the capability of CEHRT to automatically populate most of the list of required elements to meet this measure, which significantly reduces the administrative burden of providing this information. Finally, we believe that the standards established for this objective by ONC will serve as a content standard that will allow this information to be more easily transmitted and uploaded to another certified EHR, thereby reducing the cost of sharing information.

Comment: Some commenters noted that patient engagement could occur effectively with or without online access, and patients should be encouraged to use any method (for example, telephone, internet, traditional mail) that suits them. These commenters noted that engagement offline reduces both the need and value for engagement online.

Response: We agree that patient engagement can occur effectively through a variety of media, and we also believe that electronic access to discharge information can be an important component of patient compliance and improving longitudinal care. We do not believe that offline engagement reduces the need for online access, as patients may opt to access information in a variety of ways. Because of the variety of ways that patients/families may access information, we keep the threshold for this measure low. Measuring other means of accessing health information is beyond the scope of the EHR Incentive Programs. We also note that online access to health information can enhance offline engagement—for example, patients could download information from a hospital admission

to bring with them for a consult on follow-up care—which is one of the primary goals of the EHR Incentive Programs.

Comment: Some commenters expressed concern that vendors would not be able to make these capabilities available as part of CEHRT in time for the beginning of Stage 2.

Response: Many CEHRT vendors already make patient portals available that would meet the certification criteria and standards required for this measure. Although the Stage 2 eligible hospital/CAH measure requires some additional required elements and fields capabilities, we believe vendors will be able to make these capabilities available in time for the beginning of Stage 2.

Comment: Some commenters suggested that basing the exclusion on the broadband data available from the FCC Web site (*www.broadband.gov*) was suspect since the data originates from vendors.

Response: The broadband data made available from the FCC was collected from over 3,400 broadband providers nationwide. This data was then subject to many different types of analysis and verification methods, from drive testing wireless broadband service across their highways to meeting with community leaders to receive feedback. Representatives met with broadband providers, large and small, to confirm data, or suggest changes to service areas, and also went into the field looking for infrastructure to validate service offerings in areas where more information was needed. Therefore, we believe the data is appropriate for the exclusion to this measure. We note that since publication of our proposed rule the Web site has changed to *www.broadbandmap.gov* and the speed used has changed from 4Mbps to 3Mbps. We are updating our exclusion to reflect these changes.

Comment: Some commenters believe that broadband exclusions should be based on the patients' locations instead of the providers, since county-level data may not be granular enough to capture all areas of low broadband availability within a particular region.

Response: Although we agree that a broadband exclusion based primarily on the individual locations of each patient seen would be more accurate, we do not believe that there is any method of making this determination for every patient without placing an undue burden on the provider. We continue to believe that limited broadband availability in the eligible hospital's or CAH's immediate practice area, coupled with the low threshold of this measure, adequately serves as an acceptable proxy for determining areas where online access can present a challenge for patients. Therefore, after consideration of the public comments received, we are finalizing the broadband exclusion as proposed.

Comment: Some commenters suggested that the required element of ''Problem list maintained by the hospital on the patient'' should be made consistent with the required element in the objective of the same name and changed to ''Problem list.'' Other commenters asked for clarification of ''Relevant past diagnoses known by the hospital'' and how this element differs from ''Problem list.''

Response: We agree that this language should be made standard. By ''Relevant past diagnoses known by the hospital'' we mean to indicate historical entries in the patient's problem list. Therefore, we are eliminating the ''Relevant past diagnoses'' element and modifying the problem list element to ''Current and past problem list'' in the list of required elements below.

Comment: Some commenters suggested that displaying all historical medications for each patient under the required element of ''Medication list maintained by the hospital on the patient (both current admission and historical)'' would be too burdensome for hospitals. These commenters suggested amending the required element to only the active medication list maintained by CEHRT. They also expressed confusion over the use of the term ''current admission'' since the information for this measure would be posted after the patient's discharge.

Response: We believe that just as providing a historical problem list for the patient can be useful, so too can providing a historical list of all medications. To clarify the intention of this objective, we are modifying the language in the list of required elements below to read ''Active medication list and medication history. Current admission referred to the admission and subsequent discharge that places the patient in the denominator for this measure.

Comment: Some commenters suggested that ''Laboratory test results (available at discharge)'' could result in a large number of test results that could be confusing to patients. They suggested limiting this required element to a subset of lab results of a particular type or lab results from the last 24 hours of admission.

Response: We believe that a list of all laboratory test results can be beneficial to longitudinal care, therefore, we decline to modify this required element either by type of lab result or by any time period beyond those lab test results available at discharge.

Comment: Some commenters suggested that the required element of ''Care transition summary and plan for next provider of care (for transitions other than home)'' should be made consistent with the required element in the objective of the same name and changed to ''Care plan field, including goals and instructions.'' Some commenters also suggested that care transition plans are more appropriate for providers than patients.

Response: By ''care transition summary and plan for next provider of care'' we mean for eligible hospitals and CAHs to include both the care plan field(s), including goals and instructions, and a copy of the summary of care document that hospitals must generate and provide for the core objective of ''The eligible hospital or CAH that transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral.'' While we believe that the summary of care documents are best exchanged directly with the provider to whom the hospital is transitioning care or referring the patient, we also believe that providing an electronic copy with discharge information will ensure that the provider can easily access the information after the transition of referral. We have modified the language in the list of required elements below to reflect this.

After consideration of the public comments received, we are finalizing the first meaningful use measure for eligible hospitals and CAHs at § 495.6(l)(8)(ii)(A) as proposed. We are modifying the second meaningful use measure for eligible hospitals and CAHs to be ''More than 5 percent of all patients (or their authorized representatives) who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the EHR reporting period'' at § 495.6(l)(8)(ii)(B), and the exclusion for eligible hospitals and CAHs at § 495.6(l)(8)(iii) as ''Any eligible hospital or CAH that is located in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period is excluded from the second measure.''

We further specify that in order to meet this objective and measure, an

eligible hospital or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(e)(1).

To calculate the percentage of the first measure for providing patients timely access to discharge information, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients discharged from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator whose information is available online within 36 hours of discharge.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an eligible hospital or CAH to meet this measure.

To calculate the percentage of the second measure for reporting on the number of unique patients discharged from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period (or their authorized representatives) who view, download or transmit health information, CMS and ONC have worked together to define the following for this objective:

- *Denominator:* Number of unique patients discharged from an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of unique patients (or their authorized representatives) in the denominator who have viewed online, downloaded, or transmitted to a third party the discharge information provided by the eligible hospital or CAH.
- *Threshold:* The resulting percentage must be more than 5 percent in order for an eligible hospital or CAH to meet this measure.
- *Exclusion:* Any eligible hospital or CAH will be excluded from the second measure if it is located in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period.

The following information must be available to satisfy the objective and measure:

- Patient name.
- Admit and discharge date and location.
- Reason for hospitalization.
- Care team including the attending of record as well as other providers of care.
- Procedures performed during admission.
- Current and past problem list.
- Current medication list and medication history.
- Current medication allergy list and medication allergy history.
- Vital signs at discharge.
- Laboratory test results (available at time of discharge).
- Summary of care record for transitions of care or referrals to another provider.
- Care plan field(s), including goals and instructions.
- Discharge instructions for patient.
- Demographics maintained by hospital (sex, race, ethnicity, date of birth, preferred language).
- Smoking status.

As noted in the proposed rule, this is not intended to limit the information made available by the hospital. A hospital can make available additional information and still align with the objective. Please note that while some of the information made available through this measure is similar to the information made available in the summary of care document that must be provided following transitions of care or referrals, the list of information above is specific to the view online, download, and transmit objective. Patients and providers have different information needs and contexts, so CMS has established separate required fields for each of these objectives.

Proposed Eligible Hospital/CAH Objective: Record whether a patient 65 years old or older has an advance directive.

In our proposed rule, we noted that the HIT Policy Committee recommended making this a core objective and also requiring eligible hospitals and CAHs to either store an electronic copy of the advance directive in the CEHRT or link to an electronic copy of the advance directive. However, we proposed to maintain this objective as part of the menu set for Stage 2, and we did not propose the requirement of an electronic copy or link to the advance directive. As we stated in our Stage 1 final rule (75 FR 44345), we have continuing concerns that there are potential conflicts between storing advance directives and existing state laws. Also, we believe that because of state law restrictions, an advance directive stored in an EHR may not be actionable. Finally, we believe that eligible hospitals and CAHs may have other methods of satisfying the intent of this objective at this time, although we recognize that these workflows may change as EHR technology develops and becomes more widely adopted. Therefore, we did not propose to adopt the HIT Policy Committee's recommendations for this objective.

The HIT Policy Committee has also recommended the inclusion of this objective for EPs in Stage 2. In our Stage 1 final rule (75 FR 44345), we indicated our belief that many EPs will not record this information under current standards of practice and will only require information about a patient's advance directive in rare circumstances. We continue to believe this is the case and that creating a list of specialties or types of EPs that will be excluded from the objective will be too cumbersome and still might not be comprehensive. Therefore, we did not propose the recording of the existence of advance directives as an objective for EPs in Stage 2. However, we solicited public comment on this decision and encouraged commenters to address specific concerns regarding scope of practice and ease of compliance for EPs. And we note that nothing in this rule compels the use of advance directives.

Comment: While some commenters supported the HIT Policy Committee's recommendations, many recommended that we keep this measure as part of the menu set. We received several comments about a link or copy of the advance directives, and these commenters generally supported our proposal of not including this as part of the objective.

Response: While we appreciate the commenters support and the HITPC's reiteration of their recommendation, neither the HITPC nor other commenters provided new information that would address our concerns regarding conflicting state laws.

Comment: While most commenters agreed that this objective should not be extended to EPs at this time, a select few suggested adding it as part of the menu set.

Response: We are not extending this objective to EPs. Our belief that many EPs would not record this information under current standards of practice was supported by commenters. Also, we continue to believe that creating a list of specialties or types of EPs that would be excluded from the objective would be too cumbersome and would not be comprehensive.

After consideration of public comments, we are finalizing this objective for eligible hospitals and CAHs at § 495.6(m)(1)(i) as proposed.

Proposed Eligible Hospital/CAH Measure: More than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period have

an indication of an advance directive status recorded as structured data.

In the proposed rule, we explained that the calculation of the denominator for the measure of this objective is limited to unique patients age 65 or older who are admitted to an eligible hospital's or CAH's inpatient department (POS 21). Patients admitted to an emergency department (POS 23) should not be included in the calculation. As we discussed in our Stage 1 final rule (75 FR 44345), we believe that this information is a level of detail that is not practical to collect on every patient admitted to the eligible hospital's or CAH's emergency department, and therefore, have limited this measure only to the inpatient department of the hospital.

Comment: A commenter indicated that nearly 70 percent of hospitals could meet this measure in Fall 2011.

Response: Data collected from Stage 1 attestations shows that less than 15 percent of hospitals deferred this measure.

After consideration of public comments, we are finalizing this measure for eligible hospitals and CAHs at § 495.6(m)(1)(ii) as proposed. We are maintaining the exclusion for any eligible hospital or CAH that admits no patients age 65 years old or older during the EHR reporting period.

We further specify that in order to meet this objective and measure, an EP must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(17).

- *Denominator:* Number of unique patients age 65 or older admitted to an eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period.
- *Numerator:* The number of patients in the denominator who have an indication of an advance directive status entered using structured data.
- *Threshold:* The resulting percentage must be more than 50 percent in order for an eligible hospital or CAH to meet this measure.
- *Exclusion:* Any eligible hospital or CAH that admits no patients age 65 years old or older during the EHR reporting period.

(f) HIT Policy Committee Recommended Objectives Discussed in the Proposed Rule Without Proposed Regulation Text

We did not propose these objectives for Stage 2 as explained at each objective, but we solicited comments on whether these objectives should be incorporated into Stage 2.

Hospital Objective: Provide structured electronic lab results to eligible professionals.

Although the HITPC recommended this as a core objective for Stage 2 for hospitals, we did not propose this objective for the following reasons as explained in the proposed rule. Although hospital labs supply nearly half of all lab results, they are not the predominant vendors for providers who do not share or cannot access their technology. Independent and office laboratories provide over half of the labs in this market. We stated that we were concerned that imposing this requirement on hospital labs would unfairly disadvantage them in this market. Furthermore, not all hospitals offer these services so it would create a natural disparity in meaningful use between those hospitals offering these services and those that do not. Finally, all other aspects of meaningful use in Stage 1 and Stage 2 focus on the inpatient and emergency departments of a hospital. This objective is not related to these departments, and in fact excludes services provided in these departments. We asked for comments on both the pros and cons of this objective and whether it should be considered for this final rule as recommended by the HITPC.

Comment: Nearly all of the commenters that supported the inclusion of this objective based their support wholly or in part on the concept that the benefits of hospitals providing structured electronic lab results outweigh the costs of doing so. They point to specific benefits, such as making it more likely that EPs will be able to meet the meaningful use measure of incorporating clinical lab-test results into CEHRT as structured data, as well as more general benefits of structured electronic results.

Response: The large number of commenters in support of this objective and the associated benefits they identified make a compelling case for inclusion. In particular, inclusion of this objective will enable EPs to incorporate laboratory test results into the CEHRT as structured data, which in turn adds to the ability of CEHRT to provide CDS and to calculate clinical quality measures. In addition, this objective will improve consistency in the market by incentivizing the use of the uniform standard for laboratory exchange transactions included in CEHRT as established in ONC's certification criteria at (ONC reference once available). However, the benefits identified are somewhat tempered by the makeup of the commenters supporting the inclusion of this objective, who are usually those who stand to benefit (EPs, patient advocates and others), whereas those who did not support inclusion are usually those who would bear the burden (hospitals and vendors). We summarize and respond to the comments in opposition later. However, due to the strong disagreements among commenters about the inclusion of this objective, and also concern for market impact discussed in the comments later, we will include it in the menu set of Stage 2 and not in the core set as recommended by the HITPC and supported by some of the commenters.

Comment: Several commenters questioned the applicability of this objective to meaningful use. Most stated that it was not applicable for several reasons. First, commenters asserted it is beyond the statutory authority of the Medicare EHR Incentive Program, which is established in sections of the statute that govern payment for hospital inpatient services, whereas laboratory services are paid under a different payment system. Second, as meaningful use is currently constrained to the inpatient and emergency departments, it would be inconsistent to expand it to include lab results for patients that are not admitted to either the inpatient or emergency department of the hospital. Third, systems used by hospitals to process and send laboratory results are not traditionally considered part of CEHRT, and including those systems in CEHRT could have many unintended consequences and costs.

Response: We believe the statute supports a definition of meaningful use that is not limited to actions taken within the inpatient department of a hospital. The meaningful use incentive payments and payment adjustments for Medicare eligible hospitals are established in sections of the Act that are under the hospital inpatient prospective payment system (IPPS) (sections 1886(n) and 1886(b)(3)(B)(ix) of the Act, respectively). However, the statutory definition of a ''meaningful EHR user'' under section 1886(n)(3) of the Act does not constrain the use of CEHRT to the inpatient department of the hospital. The definition requires in part that an eligible hospital must use CEHRT ''for the electronic exchange of health information to improve the quality of health care, such as promoting care coordination'' (section 1886(n)(3)(A)(ii)), which the objective of providing structured electronic lab results to ambulatory providers would support. Moreover, the majority of hospital objectives for Stages 1 and 2 of meaningful use take into account actions performed in the emergency department as well as the inpatient department. In the Stage 1 final rule, we indicated that we may consider

applying the Stage 2 criteria more broadly to all hospital outpatient settings beyond the emergency department (75 FR 44322). One of the primary reasons not to include outpatient settings in meaningful use for hospitals is the potential for overlap with settings where EPs typically would use CEHRT. We believe there is minimal risk of such overlap with this objective, as it involves a function that is controlled by the hospital, and for which EPs are a recipient and not a provider of information. In regards to the third reason identified by commenters, CEHRT and meaningful use already include the ability to report electronic lab results to public health agencies, so consequences and costs of such inclusion should have already occurred. The impact of including these systems in certification is addressed in the ONC regulation published elsewhere in this issue of the **Federal Register**.

Comment: A few commenters supported this objective because they believe that hospital labs have lagged behind independent labs in providing electronic results.

Response: We agree that hospital lab reporting should be included as a menu set objective, but without actual data demonstrating lags by hospitals in laboratory exchange with ambulatory providers, we do not find this to be a compelling reason to include the objective as part of the core set.

Comment: Commenters believed this objective is inappropriate because the meaningful use regulations do not apply to commercial clinical laboratories, leading to an adverse market impact for hospitals in competition with others that process laboratory results for physician offices. The operational impacts of this objective are significant. In the absence of functional health information exchanges, hospitals would need to create and maintain separate, system-to-system interfaces with each physician office that receives laboratory results electronically, at considerable cost and effort. The transition to using standardized code sets in laboratories that must continue to function is challenging and burdensome, particularly for small hospitals.

Response: For these reasons, we include this objective and measure in the menu set. Those hospitals that see competitive benefits in providing electronic lab results to ambulatory providers may wish to select this as a menu set objective. Those who believe that building out the capability to provide electronic lab results is not beneficial in their competitive market environments can defer the objective. Similarly, those hospitals that consider the burden too high can defer this objective.

After consideration of public comments, we are including this objective in the menu set for eligible hospitals and CAHs at § 495.6(m)(6)(i) as ''Provide structured electronic lab results to ambulatory providers.''

For each objective, we outline the benefits expected from that objective. We did not include these benefits in our proposed rule and we are adding them to this final rule. Hospitals sending structured lab results electronically to EPs using CEHRT and in accordance with designated standards will directly enhance the ability of EPs to meet meaningful use objectives, including incorporating laboratory test results into the EHR as structured data, generating lists of patients with particular conditions, utilizing clinical decision support, and enhancing the ability to calculate clinical quality measures. The addition of this objective will help improve consistency in the market, in contrast to today's environment in which inconsistencies in interface requirements are hindering the delivery of structured hospital lab results to ambulatory EHRs. This objective will also benefit hospitals by creating a uniform standard for laboratory exchange transactions, which will eliminate variation, reducing interface costs and time to deploy.

Hospital Measure: Hospital labs send (directly or indirectly) structured electronic clinical lab results to the ordering provider for more than 40 percent of electronic lab orders received.

The measure for this objective recommended by the HIT Policy Committee is that 40 percent of clinical lab test results electronically sent by an eligible hospital or CAH will need to be done so using the capabilities CEHRT. This measure requires that in situations where the electronic connectivity between an eligible hospital or CAH and an EP is established, the results electronically exchanged are done so using CEHRT. To facilitate the ease with which this electronic exchange may take place, ONC proposed that for certification, ambulatory EHR technology will need to be able to incorporate lab test results formatted in the same standard and implementation specifications to which inpatient EHR technology will need to be certified as being able to create.

Comment: Some commenters who support this objective raised concerns that small hospitals might not be able to comply due to the burden involved and suggest an unspecified exclusion for them.

Response: By including this objective as a menu set item, those hospitals that view lab reporting to ambulatory practices as too burdensome can defer this measure.

Comment: Some commenters supporting the measure indicated that they would like to see hospital reference labs that are already providing electronic lab results to ordering providers ''grandfathered'' into the measure.

Response: There are two reasons that a hospital providing electronic lab results already would need special consideration. First, they are not using the standards of CEHRT where available. Second, they may not have gotten the system they use certified. As it is meaningful use of CEHRT we do not believe that we should include exceptions to the use of CEHRT in meaningful use. We do not believe that providers must ''rip and replace'' existing systems. Existing systems that support the standards of CEHRT can be certified for inclusion and those that do not support the standards can defer the objective until they upgrade to the standards of CEHRT.

Comment: Commenters expressed concern that if the objective is included in meaningful use that the threshold is unattainable. They noted that for a hospital to send electronic lab results the EP must be able to receive electronic results and that current adoption rates do not indicate that 40 percent of EPs will be able to receive electronic lab results.

Response: The measure uses a denominator of electronic lab orders received so this consideration is already built into the measure. However, we do agree with commenters that 40 percent is a high threshold for this completely new measure as it is dependent on electronic health exchange. For the final measure we reduce the threshold to 20 percent. While we considered lowering the threshold to 10 percent, the denominator limitation that the lab order must be received electronically already limits the measure to those ordering providers capable of submitting electronic orders and implies at least some electronic health information exchange has been established between the hospital and the ordering provider.

After considering the comments, we are finalizing this measure for eligible hospitals and CAHs at § 495.6(m)(6)(ii) as ''Hospital labs send structured electronic clinical lab results to the ordering provider for more than 20 percent of electronic lab orders received.''

In order to be counted in the numerator, the hospital would need to use CEHRT to send laboratory results to the ambulatory provider in a way that has the potential for electronic incorporation of those results as structure data. Methods that have no potential for automatic incorporation such as ''portal view'' do not count in the numerator. We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(b)(6).

- *Denominator:* The number of electronic lab orders received.
- *Numerator:* The number of structured clinical lab results sent to the ordering provider.
- *Threshold:* The resulting percentage must be greater than 20 percent.

EP Objective/Measure: Record patient preferences for communication medium for more than 20 percent of all unique patients seen during the EHR reporting period.

We proposed that this requirement is better incorporated with other objectives that require patient communication and is not necessary as a standalone objective.

Commenters were supportive of the incorporation of this objective and we continue to believe that it is better incorporated; therefore, we are finalizing this provision as proposed.

Objective/Measure: Record care plan goals and patient instructions in the care plan for more than 10 percent of patients seen during the reporting period.

We proposed that this requirement is better incorporated with other objectives that require summary of care documents and is not necessary as a standalone objective.

Commenters were supportive of the incorporation of this objective as proposed and we continue to believe that it is better incorporated; therefore, we are finalizing this provision as proposed.

Objective/Measure: Record health care team members (including at a minimum PCP, if available) for more than 10 percent of all patients seen during the reporting period; this information can be unstructured.

We proposed that this requirement is better incorporated with other objectives that require summary of care documents and is not necessary as a standalone objective.

Commenters were supportive of the incorporation of this objective as proposed and we continue to believe that it is better incorporated; therefore, we are finalizing as proposed.

Objective/Measure: Record electronic notes in patient records for more than 30 percent of office visits.

In the proposed rule, we encouraged public comment regarding the inclusion of this objective/measure. We noted that narrative entries are considered an important component of patient records and complement the structured data captured in CEHRT. We also noted our understanding that electronic notes are already widely used by providers and therefore may not need to include this as a meaningful use objective.

Comment: Commenters agreed that existing technology has the capability to capture notes in an electronic form for inclusion in the patient record. Other commenters mentioned that not all CEHRT in use currently include the capability to incorporate narrative clinical documentation.

Response: We reiterate the statement in the proposed rule regarding the important contribution of narrative clinical documentation in the patient record. In light of the comments that not all CEHRT currently has the capability to incorporate this clinical documentation, we agree to incorporate this functionality to record electronic notes as an additional menu objective for Stage 2 of meaningful use. The ONC standards and certification criteria final rule associated with this objective/measure is published elsewhere in this issue of the **Federal Register**. We believe that inclusion of electronic patient notes to the meaningful use menu objectives is another incremental step towards maximizing the potential of EHR technology.

Comment: The HIT Policy Committee commented that this objective/measure should apply to both EPs, eligible hospitals and CAHs because some certified EHRs do not have clinical documentation and because they believe that a complete record (including progress notes) is required to deliver high quality, efficient care.

Response: We agree and are adopting this objective in the menu set for Stage 2 for EPs, eligible hospitals and CAHs in order to allow providers access to the most accurate and complete patient information available electronically to support quality of care efforts across patient care settings.

Comment: A commenter suggested that if this objective/measure becomes part of the final rule it will require a clear definition of how notes are defined and who may create, edit and sign them in order to be included in the measure numerator. Other commenters requested clarification of the term electronic note and whether it would include nursing notes, flow sheets, operative reports, discharge summaries, consults, etc. in addition to basic progress notes.

Response: For this objective, we have determined that any EP as defined for the Medicare or Medicaid EHR Incentive Programs, or an authorized provider of the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) may author, edit, and provide an electronic signature for the electronic notes in order for them to be considered for this measure. We further define electronic notes as electronic progress notes for the purpose of this measure. We will rely on providers own determinations and guidelines defining when progress notes are necessary to communicate individual patient circumstances and for coordination with previous documentation of patient observations, treatments and/or results in the electronic health record.

Comment: Many commenters agreed with the inclusion of the text searchable certification requirement and agreed that portions of clinical notes are already being collected electronically. The HIT Policy Committee recommended inclusion of this measure because some certified EHRs do not have clinical documentation, and believe that the benefit of a complete patient record, including progress notes, is required to deliver high quality, efficient care. Several commenters were opposed to the inclusion of this additional measure in order to limit the number of reporting objectives.

Response: Based on the multiple reasons stated in this preamble we agree with the benefits of including the electronic progress notes measure in the menu set for the Stage 2 meaningful use objectives. We envision continued technological advances in the capture and processing of text and diagrammatic data such as research of natural language processing. We also believe there is added value in collecting both narrative data and structured data in the EHR and using that information to track key clinical conditions and communicating that information for care coordination purposes. Therefore, we are including this objective/measure to record electronic notes in the patient records for more than 30 percent of office visits or unique patients admitted to an eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) as was originally recommended by the HITPC.

After consideration of public comments, we are finalizing this objective for EPs at § 495.6 (k)(6)(i) and for eligible hospitals and CAHs at § 495.6(m)(5)(i) as ''Record electronic notes in patient records.''

We are adding the measure for EPs at § 495.6(k)(6)(ii) and for eligible hospitals and CAHs at § 495.6(m)(5)(ii) of our regulations to include this new measure:

EP Menu Measure: Enter at least one electronic progress note created, edited and signed by an EP for more than 30 percent of unique patients with at least one office visit during the EHR reporting period. Electronic progress notes must be text-searchable. Non-searchable notes do not qualify, but this does not mean that all of the content has to be character text. Drawings and other content can be included with searchable text notes under this measure.

Eligible Hospital/CAH Menu Measure: Enter at least one electronic progress note created, edited and signed by an authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) for more than 30 percent of unique patients admitted to the eligible hospital or CAH's inpatient or emergency department during the EHR reporting period. Electronic progress notes must be text-searchable. Non-searchable notes do not qualify, but this does not mean that all of the content has to be character text. Drawings and other content can be included with searchable text notes under this measure.

We further specify that in order to meet this objective and measure, an EP, eligible hospital, or CAH must use the capabilities and standards of CEHRT at 45 CFR 170.314(a)(9).

To calculate the percentage, CMS and ONC have worked together to define the following for these measures:

- *Denominator:* Number of unique patients with at least one office visit during the EHR reporting period for EPs or admitted to an eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.
- *Numerator:* The number of unique patients in the denominator who have at least one electronic progress note from an eligible professional or authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) recorded as text-searchable data.
- *Threshold:* The resulting percentage must be more than 30 percent in order for an EP, eligible hospital or CAH to meet this measure.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
CORE SET			
Improving quality, safety, efficiency, and reducing health disparities.	Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.	Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.	More than 60 percent of medication, 30 percent of laboratory, and 30 percent of radiology orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.
	Generate and transmit permissible prescriptions electronically (eRx).	.....	More than 50 percent of all permissible prescriptions, or all prescriptions written by the EP and queried for a drug formulary and transmitted electronically using CEHRT.
	Record the following demographics: • Preferred language • Sex • Race • Ethnicity • Date of birth	Record the following demographics: • Preferred language • Sex • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.	More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have demographics recorded as structured data.
	Record and chart changes in vital signs: • Height/length • Weight • Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0–20 years, including BMI	Record and chart changes in vital signs: • Height/length • Weight • Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0–20 years, including BMI	More than 80 percent of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES—Continued

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
	Record smoking status for patients 13 years old or older.	Record smoking status for patients 13 years old or older.	More than 80 percent of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) during the EHR reporting period have smoking status recorded as structured data.
	Use clinical decision support to improve performance on high-priority health conditions.	Use clinical decision support to improve performance on high-priority health conditions.	1. Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an EP, eligible hospital or CAH's scope of practice or patient population, the clinical decision support interventions must be related to high-priority health conditions. It is suggested that one of the five clinical decision support interventions be related to improving healthcare efficiency. 2. The EP, eligible hospital, or CAH has enabled and implemented the functionality for drug and drug allergy interaction checks for the entire EHR reporting period.
	Incorporate clinical lab-test results into Certified EHR Technology as structured data.	Incorporate clinical lab-test results into Certified EHR Technology as structured data.	More than 55 percent of all clinical lab tests results ordered by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative affirmation or numerical format are incorporated in Certified EHR Technology as structured data.
	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition.
	Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care and send these patients the reminder, per patient preference.	.....	More than 10 percent of all unique patients who have had two or more office visits with the EP within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference when available.
		Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).	More than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES—Continued

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
Engage patients and families in their health care.	Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.	.....	1. More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information. 2. More than 5 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download, or transmit to a third party their health information.
		Provide patients the ability to view online, download, and transmit information about a hospital admission.	1. More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge. 2. More than 5 percent of all patients (or their authorized representatives) who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the reporting period.
	Provide clinical summaries for patients for each office visit.	.....	Clinical summaries provided to patients or patient-authorized representatives within 1 business day for more than 50 percent of office visits.
	Use Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.	Use Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.	Patient-specific education resources identified by CEHRT are provided to patients for more than 10 percent of all unique patients with office visits seen by the EP during the EHR reporting period. More than 10 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.
	Use secure electronic messaging to communicate with patients on relevant health information.	.....	A secure message was sent using the electronic messaging function of Certified EHR Technology by more than 5 percent of unique patients (or their authorized representatives) seen by the EP during the EHR reporting period.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES—Continued

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
Improve care coordination	The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.	The eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.	The EP, eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).
	The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.	The eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.	1. The EP, eligible hospital, or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals. 2. The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 10% of such transitions and referrals either—(a) electronically transmitted using CEHRT to a recipient or (b) where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. 3. An EP, eligible hospital or CAH must satisfy one of the two following criteria: (A) Conducts one or more successful electronic exchanges of a summary of care document, as part of which is counted in ''measure 2'' (for EPs the measure at § 495.6(j)(14)(ii)(B) and for eligible hospitals and CAHs the measure at § 495.6(l)(11)(ii)(B)) with a recipient who has EHR technology that was developed designed by a different EHR technology developer than the sender's EHR technology certified to 45 CFR 170.314(b)(2); or (B) Conducts one or more successful tests with the CMS designated test EHR during the EHR reporting period.
Improve population and public health.	Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.	Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES—Continued

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
		Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to public health agencies for the entire EHR reporting period.
		Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.
Ensure adequate privacy and security protections for personal health information.	Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.	Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in CEHRT in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.
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Improving quality, safety, efficiency, and reducing health disparities.	.....	Record whether a patient 65 years old or older has an advance directive.	More than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period have an indication of an advance directive status recorded as structured data.
	Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.	Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.	More than 10 percent of all tests whose result is one or more images ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period are accessible through Certified EHR Technology.
	Record patient family health history as structured data.	Record patient family health history as structured data.	More than 20 percent of all unique patients seen by the EP or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.
		Generate and transmit permissible discharge prescriptions electronically (eRx).	More than 10 percent of hospital discharge medication orders for permissible prescriptions (for new, changed, and refilled prescriptions) are queried for a drug formulary and transmitted electronically using Certified EHR Technology.

TABLE B5—STAGE 2 OBJECTIVES AND MEASURES—Continued

Health outcomes policy priority	Stage 2 objectives		Stage 2 measures
	Eligible professionals	Eligible hospitals and CAHs	
	Record electronic notes in patient records.	Record electronic notes in patient records.	Enter at least one electronic progress note created, edited and signed by an eligible professional for more than 30 percent of unique patients with at least one office visit during the EHR reporting period. Enter at least one electronic progress note created, edited and signed by an authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) for more than 30 percent of unique patients admitted to the eligible hospital or CAH's inpatient or emergency department during the EHR reporting period. Electronic progress notes must be text-searchable. Non-searchable notes do not qualify, but this does not mean that all of the content has to be character text. Drawings and other content can be included with searchable text notes under this measure.
		Provide structured electronic lab results to ambulatory providers.	Hospital labs send structured electronic clinical lab results to the ordering provider for more than 20 percent of electronic lab orders received.
Improve Population and Public Health.	Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.	.....	Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.
	Capability to identify and report cancer cases to a public health central cancer registry, except where prohibited, and in accordance with applicable law and practice.	.....	Successful ongoing submission of cancer case information from CEHRT to a public health central cancer registry for the entire EHR reporting period.
	Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.	.....	Successful ongoing submission of specific case information from Certified EHR Technology to a specialized registry for the entire EHR reporting period.

B. Reporting on Clinical Quality Measures Using Certified EHR Technology by Eligible Professionals, Eligible Hospitals, and Critical Access Hospitals

The following sections address CQMs reporting requirements using CEHRT. These include: EHR technology certification requirements; criteria for CQM selection; time periods for reporting CQMs; issues related to specifications for CQMs and transmission formats; reporting options and CQMs for EPs; reporting methods for EPs; reporting options and CQMs for eligible hospitals and CAHs; and reporting methods for eligible hospitals and CAHs.

1. Time Periods for Reporting CQMs

This section addresses the reporting periods and submission periods as they relate to reporting CQMs only. For a summary of the reporting and submission periods proposed for CQMs, please refer to Table 5 in the Stage 2 proposed rule (77 FR 13742).

We proposed that the reporting period for CQMs, which is the period during which data collection or measurement for CQMs occurs, would continue to track with the EHR reporting periods for the meaningful use objectives and measures:

- EPs: January 1 through December 31 (calendar year).
- Eligible Hospitals and CAHs: October 1 through September 30 (federal fiscal year).
- EPs, eligible hospitals, and CAHs in their first year of meaningful use for Stage 1, any continuous 90-day period within the calendar year (CY) or federal fiscal year (FY), respectively.

To avoid a payment adjustment, Medicare EPs and eligible hospitals that are in their first year of demonstrating meaningful use in the year immediately preceding any payment adjustment year would have to ensure that their 90-day EHR reporting period ends at least 3 months before the end of the CY or FY, and that all submission is completed by October 1 or July 1, respectively. For more information on payment adjustments, see section II.D. of this final rule.

The submission period is the time during which EPs, eligible hospitals, and CAHs may submit CQM information. We proposed the submission period for CQM data generally would be the 2 months immediately following the end of the EHR reporting period as follows:

- EPs: January 1 through February 28.
- Eligible Hospitals and CAHs: October 1 through November 30.
- EPs, eligible hospitals, and CAHs in their first year of Stage 1: Anytime after the end of their 90-day EHR reporting period until the end of the 2 months immediately following the end of the CY or FY, respectively. However, for purposes of avoiding the payment adjustments, Medicare EPs and eligible hospitals that are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year must submit their CQM data no later than October 1 (EPs) or July 1 (eligible hospitals) of such preceding year.

Comment: Several commenters stated that the first year of a new stage for reporting CQMs should only require a 90-day or 180-day reporting period instead of a 365-day reporting period.

Response: We agree that vendors, EPs, eligible hospitals, and CAHs may need more time to develop, test, and implement EHR technology certified to the 2014 Edition EHR certification criteria and to be able to meet the CQM reporting requirements that we proposed beginning in 2014. Therefore, for the reasons discussed in this section, we are modifying the reporting periods for CQMs in 2014 to match the EHR reporting periods that we are finalizing for 2014. By using 3-month quarters as the reporting periods in 2014 for providers that are beyond their first year of demonstrating meaningful use instead of requiring a full year as proposed, we allow vendors and health care providers as much as 9 months more time to program, develop, and implement CEHRT, and meet the requirements for meaningful use in 2014. We note that the 3-month quarter reporting period is only applicable for 2014. For 2015 and subsequent years, we are finalizing our proposal of a full year reporting period for EPs, eligible hospitals and CAHs that are beyond their first year of demonstrating meaningful use. We have selected 3-month quarters rather than any continuous 90-day period to promote more ready comparisons of data. This is particularly important for eligible hospitals and CAHs since many of the CQMs that we are finalizing for 2014 and subsequent years are also used in the CMS Hospital IQR Program. We have indicated our desire to transition the CMS Hospital IQR Program to collecting EHR-based quality data. Having data from hospitals for comparable quarter timeframes as used for the CMS Hospital IQR Program will be beneficial for comparing chart abstracted data with data derived from CEHRT and will facilitate data collection mode for potential future usage for Hospital Compare public reporting and the CMS Hospital Value Based Purchasing programs.

After consideration of the public comments received, we are finalizing the reporting and submission periods as follows. The reporting period for CQMs generally will be the same as an EP's, eligible hospital's, or CAH's respective EHR reporting period for the meaningful use objectives and measures, with the exceptions discussed later in this section. Please note that Medicare EPs who choose to report CQMs through the options we are finalizing that rely on other CMS programs (namely, Option 2—PQRS (see section II.B.6.c. of this final rule) and the group reporting options—Physician Quality Reporting System (PQRS) and Accountable Care Organizations (ACOs) (see section II.B.6.d. of this final rule) would be subject to the reporting periods for CQMs established for those programs. As an example using CY 2014, for Medicare EPs who choose to submit CQMs under Option 2 (PQRS EHR Reporting Option) for purposes of satisfying the CQM reporting component of meaningful use, the reporting periods for the PQRS EHR reporting that fall within CY 2014 would apply. Medicaid EPs and eligible hospitals must submit CQM data for a reporting period that is the same as their EHR reporting period using the reporting methods and submission periods specified by their state Medicaid agency.

In 2013, the reporting period for CQMs will continue to be an EP's, eligible hospital's or CAH's respective EHR reporting period. The submission period will be the 2 months immediately following the end of the CY or FY, respectively (EPs: January 1 through February 28, 2014; eligible hospitals and CAHs: October 1 through November 30, 2013). EPs, eligible hospitals and CAHs in their first year of meaningful use may submit CQM data anytime after the end of their 90-day EHR reporting period until the end of the 2 months immediately following the end of the CY or FY, respectively.

Beginning in 2014 and in subsequent years, for EPs, eligible hospitals and CAHs that are in their first year of meaningful use, the reporting period for CQMs will be their respective 90-day EHR reporting period, and they must submit CQM data by attestation. The submission period will be anytime after the end of their respective 90-day EHR reporting period until the end of the 2 months immediately following the end of the CY or FY, respectively. However, for purposes of avoiding a payment adjustment, Medicare EPs and eligible hospitals that are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year must submit their CQM data no later than October 1 (EPs) or July 1 (eligible hospitals) of such preceding year. We note that these deadlines do not apply to CAHs. For more details on submission deadlines specific to CAHs, please refer to section II.D.4. of this final rule.

Beginning in 2014 and in subsequent years, EPs, eligible hospitals and CAHs that are beyond their first year of meaningful use must electronically submit CQM data unless the Secretary lacks the capacity to accept electronic submission. In the unlikely event that the Secretary does not have the capacity to accept electronic submission, then consistent with sections 1848(o)(2)(B)(ii) and 1886(n)(3)(B)(ii) of the Act, we would continue to accept attestation as a method of reporting CQMs. We would inform the public of this fact by publishing a notice in the **Federal Register** and providing instructions on how CQM data should be submitted to us. For additional details on the reporting methods for EPs, please refer to sections II.B.6.c. and II.B.6.d. of this final rule, and for the reporting methods for eligible hospitals and CAHs, please refer to section II.B.8.b. of this final rule. The reporting periods for CQMs in 2014 for EPs, eligible hospitals, and CAHs that are beyond their first year of meaningful use are as follows:

- EPs, eligible hospitals and CAHs may report CQM data for the full CY or FY 2014, respectively, if desired. Alternatively, they may report CQM data for the 3-month quarter(s) that is/are their respective EHR reporting period.

++ For EPs, the 3-month quarters are as follows:
—January 1, 2014 through March 31, 2014
—April 1, 2014 through June 30, 2014
—July 1, 2014 through September 30, 2014
—October 1, 2014 through December 31, 2014
++ For eligible hospitals and CAHs, the 3-month quarters are as follows:
—October 1, 2013 through December 31, 2013
—January 1, 2014 through March 31, 2014
—April 1, 2014 through June 30, 2014
—July 1, 2014 through September 30, 2014

In all cases of electronic submission, the submission period will be the 2 months immediately following the end of the CY or FY, respectively. This submission period will apply regardless of whether an EP, eligible hospital or CAH reports CQM data for the full CY or FY, respectively, or only for a 3-month quarter:

• EPs: January 1, 2015 through February 28, 2015.
• Eligible Hospitals and CAHs: October 1, 2014 through November 30, 2014.

The reporting periods for CQMs in 2015 and in subsequent years for EPs, eligible hospitals, and CAHs that are beyond their first year of meaningful use will be the full CY or FY, respectively. For EPs, we expect to accept a single annual submission. For eligible hospitals and CAHs, we expect to align with the submission frequency of the Hospital IQR program for electronic reporting of CQMs.

We summarize the reporting and submission periods beginning with CY/FY 2014 for EPs, eligible hospitals, and CAHs reporting CQMs via attestation in Table 5 and reporting CQMs electronically in Table 6.

TABLE 5—REPORTING AND SUBMISSION PERIODS FOR EPS, ELIGIBLE HOSPITALS AND CAHS IN THEIR FIRST YEAR OF MEANINGFUL USE SUBMITTING CQMS VIA ATTESTATION BEGINNING WITH CY/FY 2014

Provider type	Reporting period for first year of meaningful use (Stage 1)	Submission period for first year of meaningful use (Stage 1)*
EP	90 consecutive days	Anytime immediately following the end of the 90-day reporting period, but no later than February 28 of the following calendar year.
Eligible Hospital/CAH	90 consecutive days	Anytime immediately following the end of the 90-day reporting period, but no later than November 30 of the following fiscal year.

*For purposes of avoiding a payment adjustment, Medicare EPs and eligible hospitals that are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year must submit their CQM data no later than October 1 (EPs) or July 1 (eligible hospitals) of such preceding year.

TABLE 6—REPORTING AND SUBMISSION PERIODS FOR EPS, ELIGIBLE HOSPITALS AND CAHS BEYOND THEIR FIRST YEAR OF MEANINGFUL USE SUBMITTING CQMS ELECTRONICALLY BEGINNING WITH CY/FY 2014

Provider type	Optional reporting period in 2014*	Reporting period for subsequent years of meaningful use (stage 1 and subsequent stages)	Submission period for subsequent years of meaningful use (stage 1 and subsequent stages)*
EP	Calendar year quarter: January 1–March 31 April 1–June 30 July 1–September 30 October 1–December 31	1 calendar year (January 1–December 31).	2 months following the end of the reporting period (January 1–February 28).
Eligible Hospital/CAH	Fiscal year quarter October 1–December 31 January 1–March 31 April 1–June 30 July 1–September 30	1 Fiscal year (October 1–September 30).	2 months following the end of the reporting period (October 1–November 30).

*NOTE: The optional quarter reporting periods have the same submission period as a full year reporting period for electronic submission.

2. EHR Technology Certification Requirements for Reporting of CQMs

ONC adopts certification criteria for EHR technology and proposed a 2014 Edition of certification criteria in a proposed rule (77 FR 13832). As such, we proposed to require that CEHRT, as defined by ONC, must be used by EPs, eligible hospitals, and CAHs to satisfy their CQM reporting requirements (77 FR 13743). We proposed that CQM reporting methods could include the following:

• Aggregate reporting methods (EPs, eligible hospitals, and CAHs):
++ Attestation
++ Electronic submission
• Patient-level reporting methods:
++ The PQRS EHR reporting option, the group reporting options for PQRS, the Medicare SSP or Pioneer ACOs (note: these are reporting methods for EPs)
++ The manner similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs.

For the attestation and aggregate electronic reporting methods, we proposed that EPs, eligible hospitals, and CAHs must only submit CQMs that their EHR technology had been certified to ''incorporate and calculate'' (45 CFR 170.314(c)(2) in ONC's rule). For example, if an EP's CEHRT was certified to calculate CQMs #1 through #9, and the EP submitted CQMs #1 through #8 and #25, the EP would not have met the meaningful use requirement for reporting CQMs because his/her CEHRT was not certified to calculate CQM #25. For the attestation and aggregate electronic reporting methods, we proposed that CEHRT must be certified to the ''reporting'' certification criterion proposed for adoption by ONC at 45 CFR 170.314(c)(3) and which focused on

EHR technology's capability to create and transmit a standard aggregate XML-based file that CMS can electronically accept.

Comment: Most commenters supported the requirement that EHR technology certified to the 2014 Edition EHR certification criteria should be able to capture, accurately calculate and transmit CQM data. Many of these commenters pointed out EHR technology certified to the 2011 Edition EHR certification criteria did not produce accurate results and was not explicitly tested and certified for accurate CQM calculation. As a result of experiences in Stage 1, some commenters recommended requiring that EHR technologies be able to calculate all measures finalized by CMS in order to be certified rather than requiring only one CQM to be certified, as was proposed by ONC to satisfy the Base EHR definition. Others supported EHR technology's output of data to another product for calculation or output in the Quality Reporting Data Architecture (QRDA) format. Many commenters also supported consistency among EHR technologies based on certification and adequate testing of the systems during certification, including use of test data. One commenter recommended closer oversight of vendors by ONC and a remediation process for vendors who do not properly implement CEHRT.

Many commenters stated that the specific XML-based format required by CMS for CQM reporting should be incorporated into ONC's certification criteria. One commenter suggested that all vendors focus on codified data collection and provide complete CCD extractions to another system (such as PopHealth) and allow that system to manage the calculations and data tables as well as provide the extraction of data for a QRDA report, stating that this method would save time and money because it would not require testing each individual EHR product. Another commenter supported the use of CQM definitions that include standards for technical and electronic specifications that allow for interoperability across EHRs and consistent use among end users.

Response: Comments on EHR technology certification requirements are outside the scope of this final rule and are addressed in ONC's Standards and Certification Criteria (S&CC) final rule published elsewhere in this issue of the **Federal Register**. ONC has addressed the CQM requirements for the Base EHR definition, the standards necessary for the submission of CQM data to CMS, and has made other conforming revisions to the proposed certification criteria in response to public comments received.

Comment: Several commenters stated that it was unrealistic to expect the transition to EHR technology certified to the 2014 Edition EHR certification criteria to be feasible for all EPs and all eligible hospitals and CAHs at the same time. These commenters explained that EHR vendors would need to develop, test, distribute upgraded products, and provide user support for a large number of clients in a short amount of time. Furthermore, EPs, eligible hospitals, and CAHs would need to devote time and resources as well as have qualified staff to purchase and implement the upgraded technology, including testing the system and training staff, which may include designing new clinical workflows. The commenters requested a more reasonable approach to transitioning to the upgraded technology that would ensure proper implementation and avoid compromising patient safety.

Response: We acknowledge that the transition to upgraded EHR technology will be a challenge for all parties involved. Due to several interrelated factors addressed by ONC and CMS to relieve regulatory burden in our respective final rules, we have respectively included certain new flexibilities for EPs, eligible hospitals, and CAHs in order to allow for a more reasonable transition to the upgraded technology. ONC has decided to finalize a more flexible CEHRT definition for the EHR reporting periods in FY/CY 2013, which would permit EPs, eligible hospitals, and CAHs to use EHR technology that has been certified only to the 2014 Edition EHR certification criteria.

For EPs, eligible hospitals, and CAHs that seek to use EHR technology certified only to the 2014 Edition EHR certification criteria in FY/CY 2013, we note that EHR technology certified to these criteria reflect the new set of CQMs we adopt in this rule for reporting beginning with FY/CY 2014. We also note that the reporting requirements in FY/CY 2013 are otherwise the same as for FY/CY 2011 and 2012, including reporting on the CQMs that were finalized in the July 28, 2010 Stage 1 final rule. For EPs, the reporting schema for CY 2013 will remain 3 core or alternate core CQMs, and 3 additional CQMs, as explained in section II.B.5.b. of this final rule. We note that EHR technology certified to the 2014 Edition certification criteria will exclude the three CQMs that we are removing from the list of EP CQMs for reporting beginning in CY 2014 (NQF 0013, 0027, 0084). NQF 0013 is in the list of core CQMs in the Stage 1 final rule, but just as in the case where one of the core CQMs would not apply to an EP's scope of practice or unique patient population, EPs can select one CQM from the list of alternate core CQMs to replace NQF 0013. Therefore, in order to meet the CQM reporting criteria for meaningful use in CY 2013, EPs who seek to use EHR technology certified only to the 2014 Edition EHR certification criteria could only select from CQMs that are included in both the Stage 1 and Stage 2 final rules. For eligible hospitals and CAHs, the reporting schema for FY 2013 will remain all 15 of the CQMs finalized for reporting in FYs 2011 and 2012 because all CQMs that were included in the Stage 1 final rule are also included in the Stage 2 final rule.

Comment: Most commenters stated that CQM exceptions (allowable reason for non-performance of a quality measure for patients that meet the denominator criteria and do not meet the numerator criteria) should be incorporated into the CQM certification requirements. Many commenters also stated that EPs should not be penalized if it is later determined that a vendor has not met the certification requirement as it would be burdensome and expensive to then purchase additional certified modules and modify workflows after an existing EHR is determined to be non-certified. The same commenters believed that EPs should have an exemption from CQM reporting requirements of meaningful use until measures have been tested and vendors have shown they have met the certification requirements.

Some commenters requested delaying implementation of CQMs that require information from Labor and Delivery information systems until they are certified. One commenter stated that EHR technology should be based on the 2011 Edition EHR certification criteria. Another commenter stated that very few vendors are providing QI measure data integrity and error-checking algorithms, citing the information in FAQ 10839 which includes that CMS does not require providers to record all clinical data in their CEHRT but that providers should report the CQM data exactly as it is generated as output from CEHRT.

Response: We do not agree with the suggestion that EHR technology should based on the 2011 Edition EHR certification criteria. The 2014 Edition EHR certification criteria are significantly enhanced compared to 2011 Edition and we believe that it is important for EPs, eligible hospitals and CAHs to adopt, implement, and use

EHR technology based on the updated certification criteria. We expect that the enhancements in the 2014 Edition certification criteria will address the accuracy of outputs from CEHRT.

We agree generally with the rest of the comments. All CQMs included in this final rule will have electronic specifications available at or around the time of publication. Certification requirements are outside the scope of this rule. We refer readers to ONC's S&CC final rule published elsewhere in this issue of the **Federal Register** for information of certification requirements for items such as CQM exceptions. We discuss the testing of CQM specifications in section II.B.4. of this final rule. We encourage EPs, eligible hospitals and CAHs to refer to the Certified HIT Products List when selecting an EHR product (*http://oncchpl.force.com/ehrcert*). We also encourage EPs, eligible hospitals, and CAHs to discuss their intent to participate in the EHR Incentive Programs with their vendors, and for vendors to communicate intentions related to certification of a product with EPs, eligible hospitals or CAHs.

After consideration of the public comments received, we are finalizing the proposals related to EHR technology certification requirements for reporting of CQMs subject to the discussion earlier. They include:

- The data reported to CMS for CQMs must originate from an EP's, eligible hospital's, or CAH's CEHRT that has been certified to ''capture and export'' in accordance with 45 CFR 170.314(c)(1) and ''electronic submission'' in accordance with 45 CFR 170.314(c)(3).
- For attestation and the aggregate electronic reporting methods, the only CQMs that can be reported are those for which an EP's, eligible hospital's, or CAH's CEHRT has been certified to ''import and calculate'' in accordance with 45 CFR 170.314(c)(2).
- In FY/CY 2013, if an EP, eligible hospital, or CAH seeks to use EHR technology certified only to the 2014 Edition EHR certification criteria for reporting CQMs, they can only report those CQMs that are included in both the Stage 1 and Stage 2 final rules. For EPs, this would exclude the option of reporting NQF 0013, 0027, 0084 from the CQMs in the Stage 1 final rule. Since NQF 0013 is a core CQM in the Stage 1 final rule, EPs would select one of the alternate core CQMs to replace it. All 15 CQMs for eligible hospitals and CAHs in the Stage 1 final rule are included in the Stage 2 final rule.

3. Criteria for Selecting CQMs

We solicited comment on a wide-ranging list of 125 potential CQMs for EPs and 49 potential CQMs for eligible hospitals and CAHs. We stated that we expected to finalize only a subset of these proposed CQMs. We discussed several criteria that we used to select the proposed CQMs.

In the proposed rule, we stated our commitment to align quality measurement and reporting among our programs (for example, IQR, PQRS, CHIPRA, ACO programs). We noted that our alignment efforts focus on several fronts including using the same measures for different programs, standardizing the measure development and electronic specification processes across CMS programs, coordinating quality measurement stakeholder involvement efforts, and identifying ways to minimize multiple submission requirements and mechanisms. In the proposed rule, we gave the example that we are working toward allowing CQM data submitted via CEHRT by EPs, eligible hospitals and CAHs to apply to other CMS quality reporting programs. A longer-term vision would be hospitals and clinicians reporting through a single, aligned mechanism for multiple CMS programs. We stated our belief that the alignment options proposed for PQRS/EHR Incentive Program would be a first step toward such a vision.

Comment: There was strong support for aligning CQMs and reporting mechanisms across multiple quality reporting programs as well as alignment with the goals of the National Quality Strategy and the HIT Policy Committee recommendations. However, some commenters addressed utility of the CQMs within the EHR Incentive Program as follows:

- Removal of measures that are not included under other quality reporting programs.
- Alignment in other areas such as specifications, reporting methods and to whom measures are reported.
- Concern that the penalties that will be applied in 2015, given the many problems that were encountered implementing Stage 1 CQMs.
- Administrative burden required by multiple submission requirements and multiple reporting mechanisms. Where possible, one commenter encouraged CMS to promote and/or mandate similar action for state, accreditation body, and private payer reporting.

Response: We appreciate the comments received and have made every effort to accommodate the concerns by aligning quality reporting for EPs with the PQRS EHR Reporting Option and establishing an infrastructure for eligible hospitals and CAHs that could be used by IQR and other hospital reporting programs to electronically report CQMs.

We continue to explore how data intermediaries and state Medicaid Agencies could participate in and further enable these quality measurement and reporting alignment efforts, while meeting the needs of multiple Medicare and Medicaid programs (for example, ACO programs, Dual Eligible initiatives, Medicaid shared savings efforts, CHIPRA and Affordable Care Act measure sets). Through these efforts, we intend to lessen provider burden and harmonize with our data exchange priorities.

In addition to statutory requirements for EPs (see section II.B.5.a. of this final rule), eligible hospitals (see sections II.B.7.a. of this final rule), and CAHs (see section II.B.7.a. of this final rule), we relied on other criteria to select the proposed CQMs for EPs, eligible hospitals, and CAHs such as measures that can be technically implemented within the capacity of the CMS infrastructure for data collection, analysis, and calculation of reporting and performance rates. This includes measures that are ready for implementation, such as those with developed specifications for electronic submission that have been used in the EHR Incentive Program or other CMS quality reporting initiatives, or that will be ready soon after the expected publication of the final rule in 2012. This also includes measures that can be most efficiently implemented for data collection and submission.

Comment: There were several comments on infrastructure regarding quality measures, the selection of quality measures, challenges of implementing EHRs and the lack of coordination between measure developers and software vendors. These comments included the following:

- CQMs require data that is not coded in a structured format within the EHRs and thus require significant resources and effort, including specialized coding and training, in order to build CQMs within the EHR systems that can produce accurate results.
- CMS should only include measures which have been sufficiently field tested and validated. The National Qualify Forum's (NQF) Quality Data Model (QDM) and Measure Authoring Tool (MAT) have not been sufficiently tested to ensure valid and accurate EHR CQM calculations.
- A general lack of communication between vendors and measure stewards.

There were also several comments providing additional recommendations for selecting quality measures, including CQMs that:

- Can be automatically abstracted from an EHR.
- Rely on data that is considered viable and accurate.
- Definitively support quality care improvement.
- Align with current quality programs.

Response: The CQMs that we are finalizing for reporting beginning with 2014 have either undergone feasibility testing in EHR systems and clinical settings or were finalized in the Stage 1 final rule for reporting in 2011 and 2012 and specifications have been updated based on experiences with reporting those CQMs. In addition, ONC's 2014 Edition certification criteria explicitly require that the data elements be captured for certification (see 45 CFR 170.314(c), as discussed in ONC's final rule). We have taken into account the recommendations of commenters in our selection of the CQMs finalized for reporting beginning in 2014, and we are finalizing measures that align with current clinical quality programs as well as definitively support quality care improvements.

Comment: Commenters pointed out the limitations of current CQMs in addressing longitudinal patient care management and population health.

Response: We are finalizing CQMs for EPs, eligible hospitals, and CAHs that will have electronic specifications available at or around the time of publication of the final rule and also meet the selection criteria described in this rule. We agree with the importance of the clinical quality measurement goals mentioned by the commenters and are working with measure stewards and measure developers to create a broader set of electronic CQMs that would address these goals.

We also identified the following as criteria used in selecting CQMs:

- CQMs that can be technically implemented within the capacity of the CMS infrastructure for data collection, analysis, and calculation of reporting and performance rates. This includes CQMs that are ready for implementation, such as those with developed specifications for electronic submission that have been used in the EHR Incentive Program or other CMS quality reporting initiatives, or that will be ready soon after the expected publication of the final rule in 2012. This also includes CQMs that can be most efficiently implemented for data collection and submission.
- CQMs that support CMS and HHS priorities for improved quality of care for people in the United States, which are based on the March 2011 report to the Congress, ''National Strategy for Quality Improvement in Health Care'' (National Quality Strategy, NQS) (*http://www.healthcare.gov/law/resources/reports/nationalqualitystrategy032011.pdf*) and the Health Information Technology Policy Committee's (HITPC's) recommendations (*http://healthit.hhs.gov/portal/server.pt?open=512&objID=1815&parentname=CommunityPage&parentid=7&mode=2&in_hi_userid=11113&cached=true*).
- CQMs that address known gaps in quality of care, such as measures in which performance rates are currently low or for which there is wide variability in performance, or that address known drivers of high morbidity and/or cost for Medicare and Medicaid.
- CQMs that address areas of care for different types of EPs (for example, Medicare- and Medicaid-eligible physicians, and Medicaid-eligible nurse-practitioners, certified nurse-midwives, dentists, physician assistants).

In an effort to align the CQMs used within the EHR Incentive Program with the goals of CMS and HHS, the NQS, and the HITPC's recommendations, we have assessed all proposed CQMs against six domains based on the NQS's six priorities, which were further developed by the HITPC Workgroups, as follows:

- *Patient and Family Engagement.* These are CQMs that reflect the potential to improve patient-centered care and the quality of care delivered to patients. They emphasize the importance of collecting patient-reported data and the ability to impact care at the individual patient level as well as the population level through greater involvement of patients and families in decision making, self care, activation, and understanding of their health condition and its effective management.
- *Patient Safety.* These are CQMs that reflect the safe delivery of clinical services in both hospital and ambulatory settings and include processes that would reduce harm to patients and reduce burden of illness. These measures should enable longitudinal assessment of condition-specific, patient-focused episodes of care.
- *Care Coordination.* These are CQMs that demonstrate appropriate and timely sharing of information and coordination of clinical and preventive services among health professionals in the care team and with patients, caregivers, and families in order to improve appropriate and timely patient and care team communication.
- *Population and Public Health.* These are CQMs that reflect the use of clinical and preventive services and achieve improvements in the health of the population served and are especially focused on the leading causes of mortality. These are outcome-focused and have the ability to achieve longitudinal measurement that will demonstrate improvement or lack of improvement in the health of the US population.
- *Efficient Use of Healthcare Resources.* These are CQMs that reflect efforts to significantly improve outcomes and reduce errors. These CQMs also impact and benefit a large number of patients and emphasize the use of evidence to best manage high priority conditions and determine appropriate use of healthcare resources.
- *Clinical Processes/Effectiveness.* These are CQMs that reflect clinical care processes closely linked to outcomes based on evidence and practice guidelines.

We solicited comments on these domains, and whether they would adequately align with and support the breadth of CMS and HHS activities to improve quality of care and health outcomes.

Comment: Many commenters supported the NQS initiative. Many commenters stated that the domains were imprecise and some CQMs can be placed in multiple domains. Some commenters recommended that the Care Coordination domain include pre- and post-acute care providers and that the CQMs be carefully assigned to the appropriate domains.

Response: We appreciate the supportive comments with respect to the NQS. We agree with commenters that certain CQMs do not fit in only a single domain. When we considered CQMs for selection, we also considered to what extent a domain is already represented in the meaningful use objectives and measures, which use performance thresholds. For example, in the area of care coordination, to be a meaningful EHR user, a provider must provide a summary of care record for more than 50 percent of their transitions of care and referrals. In addition, in the area of patient and family engagement, to be a meaningful EHR user a provider must make patients' health information available to them and potentially their caregivers and families and is responsible for ensuring that at least 5 percent of their patients or their

caregivers and families actually access that information. For these reasons, we are relaxing the requirement to report CQMs in each domain as discussed in section II.B.5.c. of this final rule for EP reporting requirements and II.B.7.c. of this final rule for eligible hospital and CAH reporting requirements.

We stated in the proposed rule that we also considered the recommendations of the Measure Applications Partnership (MAP) for inclusion of CQMs. The MAP is a public-private partnership convened by the National Quality Forum (NQF) for the primary purpose of providing input to HHS on selecting performance measures for public reporting. The MAP published draft recommendations in their Pre-Rulemaking Report on January 11, 2012 (*http://www.qualityforum.org/map/*), which includes a list of, and rationales for, all the CQMs that the MAP did not support. The MAP did not review the CQMs for 2011 and 2012 that were previously adopted for the EHR Incentive Program in the Stage 1 final rule. We stated in the proposed rule that we included some of the CQMs not supported by the MAP in Tables 7 (EPs) and 8 (eligible hospitals and CAHs) to ensure alignment with other CMS quality reporting programs, address recommendations by other Federal advisory committees such as the HITPC, and support other quality goals such as the Million Hearts Campaign. We also stated that we included some CQMs to address specialty areas that may not have had applicable CQMs in the Stage 1 final rule.

We stated in the proposed rule that we anticipated that only a subset of these CQMs would be finalized. We stated that in considering which measures to finalize, we would take into account public comment on the CQMs themselves and the priorities listed previously. We also stated that we intended to prioritize CQMs in order to align with and support to the extent possible the measurement needs of CMS program activities related to quality of care, delivery system reform, and payment reform, especially the following:

- Encouraging the use of outcome measures, which provide foundational data needed to assess the impact of these programs on population health.
- Measuring progress in preventing and treating priority conditions, including those affecting a large number of CMS beneficiaries or contributing to a large proportion of program costs.
- Improving patient safety and reducing medical harm.
- Capturing the full range of populations served by CMS programs.

Comment: Several commenters support the inclusion of CQMs recommended by the MAP. A commenter supported CQMs which are both MAP evaluated and NQF endorsed. Another commenter raised concern that CMS did not have enough time to consider the MAP recommendations as the CQMs published in the proposed rule differ from those recommended by the MAP. Some commenters were concerned that limiting the CQMs to MAP-supported and/or NQF-endorsed CQMs would discourage CQM innovation and the creation of novel CQMs and those that cover more specialties.

Response: We carefully considered the MAP recommendations and took NQF endorsement status into consideration when making our CQM selections for reporting beginning with 2014. In order to align with other quality reporting programs and address recommendations by other Federal advisory committees, such as the HITPC, as well as consider CQMs endorsed by other multistakeholder groups, we considered CQMs that were not supported by the MAP. After consideration of the public comments received, we are finalizing the policies on criteria for selecting CQMs as proposed.

4. CQM Specification

We stated in the proposed rule that we do not intend to use notice and comment rulemaking as a means to update or modify CQM specifications. In general, it is the role of the measure steward to make changes to a CQM in terms of the initial patient population, numerator, denominator, and potential exclusions. We recognized that it may be necessary to update CQM specifications after they have been published to ensure their continued relevance, accuracy, and validity. Measure specifications updates may include administrative changes, such as adding the NQF endorsement number to a CQM, correcting faulty logic, adding or deleting codes as well as providing additional implementation guidance for a CQM.

These changes would be described in full through supplemental updates to the electronic specifications for EHR submission provided by CMS. We stated that measures would be tracked on a version basis as updates to those CQMs are made, and we would require EPs, eligible hospitals, and CAHs to submit the versions of the CQMs as identified on our Web site.

We stated in the proposed rule that the complete CQM specifications would be posted on our Web site (*https://www.cms.gov/QualityMeasures/03_ElectronicSpecifications.asp*) at or around the time of the final rule. In order to assist the public in considering the proposed CQMs, we published tables titled ''Proposed CQMs for 2014 CMS EHR Incentive Programs for Eligible Professionals'' and ''Proposed CQMs for 2014 CMS EHR Incentive Programs for Eligible Hospitals and CAHs'' on this Web site. These tables contain additional information for the EP, eligible hospital, and CAH CQMs, respectively, which may not be found on the NQF Web site. We noted that some of the CQMs were still being developed and that the additional descriptions provided in the tables may still change before the final rule is published. We noted that the titles and descriptions for the CQMs included in these tables were updated by the measure stewards and therefore may not match the information provided on the NQF Web site.

We proposed that, under certain circumstances, it may be necessary to remove a CQM from the EHR Incentive Programs between rulemaking cycles. We stated in the proposed rule that when there is reason to believe the continued collection of a CQM as it is currently specified raises potential patient safety concerns and/or is no longer scientifically valid, we would take immediate action to remove the CQM from the EHR Incentive Programs and not wait for the next rulemaking cycle. Likewise, we stated if a CQM undergoes a substantive change by the measure steward between rulemaking cycles such that the measure's intent has changed, we would remove the measure immediately from the EHR Incentive Programs until the next rulemaking cycle when we could propose the revised CQM for public comment. Under this proposed policy, we would promptly remove such CQMs from the set of CQMs available for EPs or eligible hospitals and CAHs to report under the EHR Incentive Programs, confirm the removal or propose the revised CQM, in the next EHR Incentive Programs rulemaking cycle, and notify providers (EPs, eligible hospitals, and CAHs) and the public of our decision to remove the CQM(s) through the usual communication channels (memos, email notification, web site postings).

Comment: Numerous commenters indicated the importance of having CQM specifications and implementation guides as soon as possible. Several commenters pointed out that CQMs without electronic specifications should be re-tooled as eMeasures prior to inclusion in meaningful use.

Response: We will provide complete CQM specifications at or around the time of the publication of this final rule on our Web site (*https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Quality Measures/Electronic Specifications.html*). All of the CQMs that we are finalizing will be fully specified.

Comment: Many commenters noted that more than 6 months is needed to deploy and adequately test upgrades that may affect clinician workflows and patient safety. Other commenters stated that software developers need at least 18 to 24 months to alter their systems and allow for installation of software to complete process updates, development, testing, error checks, training, and roll-out before the reporting periods begin. Multiple commenters requested notification and a scheduled approach to making changes to CQM specifications. Commenters suggested that CMS post the CQMs and updates in one place for easy reference.

Response: We understand health care providers and software developers need sufficient time to accommodate CQM specification updates. However, we must balance this with our policy priority for CQMs to remain consistent with clinical practice guidelines and any new scientific data related to efficacy. To address the timing concerns mentioned by commenters, we expect to make the updated specifications, which will be tracked on a version basis, publicly available through our Web site (*https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/ElectronicSpecifications.html*) approximately 6 months in advance of the beginning of the CY and FY for EPs and hospitals, respectively. We will make every effort to have updated specifications made available earlier and ensure that measure updates are limited in scope. In the event that we remove CQMs between rulemakings, we will post this information on the same Web site and notify the public through listserv and any additional communication channels that may be appropriate.

Comment: Many commenters stated that CQM specifications should not have to be updated in CEHRT during the period for which the EHR product is certified. Some commenters pointed out the burden and complexity of supporting multiple versions of the CQMs concurrently (that is, the specifications authorized for use within the current reporting period, and the updated specifications intended for implementation in the following reporting period).

Response: CQM specifications are updated to maintain alignment with current clinical guidelines and ensure that the CQM remains relevant and actionable within the clinical care setting. We believe the benefits of having the ability to update specifications more frequently than the rulemaking cycle for the EHR Incentive Programs outweighs the burden and complexity identified by commenters.

As a result of aligning with other quality reporting programs (for example, PQRS), the CQMs and specifications are being used in multiple programs. If we do not have the ability to update specifications annually, then our respective programs may no longer align. Furthermore, without having the ability to update the specifications at least annually, the CQMs could become obsolete and would not adequately reflect current best practices. The majority of the administrative changes expected in the annual specification updates would reflect updates that vendors would routinely push to their clients' EHR technologies (for example, drug code updates).

We did not receive any comments on our proposed policy to remove CQMs between rulemaking cycles under certain circumstances.

After consideration of the public comments received, we are finalizing the following policies on CQM specifications. Updates to CQM specifications may be provided annually approximately 6 months in advance of the FY/CY for hospitals and EPs, respectively. Providers will not be required to use the updated specifications for purposes of submitting the CQMs for the EHR Incentive Program unless specified in future rulemaking. We note that EPs choosing to submit CQMs through another quality reporting program (for example, PQRS) would need to use the updated specifications if required by the other program. We are finalizing the policy on removing CQMs between rulemaking cycles under certain circumstances as proposed. In the event that one or more CQMs are removed between rulemakings, the number of CQMs that an EP, eligible hospital, or CAH must report would be reduced by the number of CQMs removed. For example, if one EP CQM was removed from the set of CQMs finalized for EPs in Table 7, EPs would only be required to submit 8 CQMs instead of 9. Likewise, if a hospital CQM is removed from the set of CQMs finalized in Table 8, eligible hospitals and CAHs would only be required to submit 15 CQMs instead of 16. The requirement that the CQMs submitted cover at least 3 domains will remain the same unless all CQMs for a particular domain have been eliminated. EPs that are not affected by such a removal of a CQM between rulemakings and could report on other CQMs are expected to continue reporting on 9 CQMs. Likewise, eligible hospitals and CAHs that are not affected and could report on other CQMs are expected to continue reporting on 16 CQMs.

5. CQMs for EPs

(a) Statutory and Other Considerations

Sections 1848(o)(2)(A)(iii) and 1903(t)(6)(C) of the Act provide for the reporting of CQMs by EPs as part of demonstrating meaningful use of CEHRT. For further explanation of the statutory requirements, we refer readers to the discussion in our proposed and final rules for Stage 1 (75 FR 1870 through 1902 and 75 FR 44380 through 44435, respectively).

Under sections 1848(o)(1)(D)(iii) and 1903(t)(8) of the Act, the Secretary must seek, to the maximum extent practicable, to avoid duplicative requirements from federal and state governments for EPs to demonstrate meaningful use of CEHRT under Medicare and Medicaid. Therefore, to meet this requirement, we continued our practice from Stage 1 of proposing CQMs that would apply for both the Medicare and Medicaid EHR Incentive Programs, as listed in sections II.B.5.b. and II.B.5.c. of this final rule.

Section 1848(o)(2)(B)(iii) of the Act requires that in selecting CQMs for EPs, and in establishing the form and manner of reporting, the Secretary shall seek to avoid redundant or duplicative reporting otherwise required, including reporting under subsection (k)(2)(C) (that is, reporting under the PQRS). Consistent with that requirement, we proposed to select CQMs for EPs for the EHR Incentive Programs that align with other quality reporting programs mentioned in the proposed rule (77 FR 13745). We stated in the proposed rule that when a CQM is included in more than one CMS quality reporting program and is reported using CEHRT, we would seek to avoid requiring EPs to report the same CQM to separate programs through multiple transactions or mechanisms.

Section 1848(o)(2)(B)(i)(I) of the Act requires the Secretary to give preference to CQMs endorsed by the entity with a contract with the Secretary under section 1890(a) (namely, the NQF). We proposed CQMs for EPs for 2013, 2014, and 2015 (and potentially subsequent years) that reflect this preference,

although we note that the Act does not require the selection of NQF endorsed CQMs for the EHR Incentive Programs. CQMs listed in this final rule that do not have an NQF identifying number are not NQF endorsed, but are included in this final rule with the intent of eventually obtaining NQF endorsement of those CQMs determined to be critical to our program.

We stated our intent to increase the total number of CQMs for EPs to include areas such as behavioral health, dental care, long-term care, special needs populations, and care coordination. We proposed new pediatric CQMs, an obstetric CQM, behavioral/mental health CQMs, CQMs related to HIV medical visits and antiretroviral therapy, two oral health CQMs, as well as other CQMs that address NQS goals. Although we did not propose additional CQMs in the areas of long-term and post-acute care due to the lack of electronic specifications, we stated that we would continue to develop or identify CQMs for these areas for future years. We received public comments related to statutory and other considerations. We have responded to those comments in later sections of this final rule, including comments related to form and manner and the clinical areas covered by specific CQMs (see sections II.B.6.c. or II.B.6.d. of this final rule).

(b) CQMs for EPs for CY 2013

We proposed that for the EHR reporting periods in CY 2013, EPs must submit data for the CQMs that were finalized in the Stage 1 final rule for CYs 2011 and 2012 (75 FR 44398 through 44411, Tables 6 and 7). We stated that we expected to post updates to the CQMs' electronic specifications on the EHR Incentive Program Web site at least 6 months prior to the start of CY 2013. As required by the Stage 1 final rule, EPs must report on 3 core or alternate core CQMs, plus 3 additional CQMs. We referred readers to the discussion in the Stage 1 final rule for further explanation of the requirements for reporting those CQMs (75 FR 44398 through 44411).

We received no public comments and are finalizing these proposals for EPs for CY 2013. We have posted updates to the CQM specifications on the EHR Incentive Program Web site (*https://www.cms.gov/apps/ama/license.asp?file=/QualityMeasures/Downloads/QMEPSupplemental.zip*) and note that they will be optional with respect to CY 2013 reporting.

(c) CQMs and Reporting Options for EPs Beginning with CY 2014

(i) Reporting Options

We proposed two reporting options that would begin in CY 2014 for Medicare and Medicaid EPs, as described as follows: Options 1 and 2. We proposed the CQMs listed in Table 8 of the proposed rule (77 FR 13749 through 13757) for all EPs (Medicare and Medicaid) for the EHR reporting periods in CYs 2014, 2015, and potentially subsequent years, regardless of whether an EP is in Stage 1 or Stage 2 of meaningful use. We stated that the policies and CQMs proposed for CYs 2014 and 2015 would continue to apply in CY 2016 and subsequent years until a new rule is published. Therefore, we referred to CQMs that apply ''beginning with'' or ''beginning in'' CY 2014. We stated that for Medicaid EPs, although the reporting method for CQMs may vary by state, the set of CQMs from which to select would be the same as for Medicare EPs. We stated that Medicare EPs who are in their first year of Stage 1 may report CQMs by attestation.

For Option 1, we proposed two alternatives (Options 1a and 1b), but stated that we intended to finalize only a single method. We proposed that Medicare EPs who participate in both the PQRS EHR reporting option and the EHR Incentive Program may choose Option 2 instead of Option 1.

- Option 1a: We proposed that EPs would select and report 12 CQMs from those listed in Table 8 of the proposed rule (77 FR 13749 to 13757), including at least 1 CQM from each of the 6 domains, which are described in section II.B.3. of this final rule. EPs would select the CQMs that best apply to their scope of practice and/or unique patient population. If an EP's CEHRT does not contain patient data for at least 12 CQMs, then the EP must report the CQMs for which there is patient data and report the remaining required CQMs as ''zero denominators'' as displayed by the EPs CEHRT. If there are no CQMs applicable to the EP's scope of practice or unique patient populations, EPs must still report 12 CQMs even if zero is the result in either the numerator and/or the denominator of the CQM. If all applicable CQMs have a value of zero from their CEHRT, then EPs must report any 12 of the CQMs. We noted one advantage of this approach is that EPs can choose CQMs that best fit their practice and patient populations. However, because of the large number of CQMs to choose from, this approach would result in fewer EPs reporting on any given CQM, and likely only a small sample of patient data represented in each CQM. We proposed that EPs would submit the CQM data in an XML-based format on an aggregate basis reflective of all patients without regard to payer.
- Option 1b: We proposed that EPs would report 11 ''core'' CQMs listed in Table 6 of the proposed rule (77 FR 13746 to 13747), plus 1 ''menu'' CQM from Table 8 of the proposed rule (77 FR 13749 to 13757). We noted that the ''core'' CQM set reflected the national priorities outlined in section II.B.3. of the proposed rule. EPs would select 1 CQM to report from the ''menu'' set based on their respective scope of practice and/or unique patient population. We explained one advantage of this approach is that quality data would be collected on a smaller set of CQMs, so the resulting data for each CQM would represent a larger number of patients and therefore could be more accurate. However, this approach could mean that more CQMs are reported with zero denominators (if they are not applicable to certain practices or populations), making the data less comprehensive. We stated that the policy on reporting ''zeros'' in the numerator and/or denominator of a CQM, as discussed previously under Option 1a, would also apply for Option 1b.
- Option 2: Submit and satisfactorily report CQMs under the PQRS's EHR Reporting Option.

We proposed that Medicare EPs who participate in both the PQRS EHR reporting option and the EHR Incentive Program may choose Option 2 instead of Option 1. In order to streamline quality reporting options for EPs participating in both programs, we proposed that Medicare EPs who submit and satisfactorily report PQRS CQMs under the PQRS's EHR reporting option using CEHRT would satisfy the CQM reporting requirement under the Medicare EHR Incentive Program. We referred readers to 42 CFR 414.90 and the CY 2012 Medicare PFS final rule with comment period (76 FR 73314) for more information about the existing requirements of the PQRS and stated that EPs who choose this Option 2 would be required to comply with any changes to the requirements of the PQRS that may apply in future years.

Comment: Many commenters preferred Option 1a instead of 1b since it offers more flexibility and a larger selection of CQMs, especially for specialties including surgery, otolaryngology, urology, and psychiatry. However, they also indicated that it would be difficult to report 1 CQM from each of the 6 domains that apply to their scope of practice and/or unique patient population.

Other commenters supported Option 1b over 1a as long as it limits the number of CQMs to those that vendors would be required to support. A few commenters suggested removing the ''one menu CQM'' requirement entirely.

Many commenters suggested a modification of Options 1a and 1b to require reporting a specific number of core CQMs (fewer than the 11 proposed) and a specific number of menu CQMs (more than 1 as proposed) along with some changes to the domain requirement. Many commenters suggested a reporting option requiring EPs to report 6 clinically relevant CQMs covering at least 2 domains, and if no CQMs are clinically relevant for an EP, they must demonstrate zeros in the denominator for 6 CQMs covering at least 2 domains. A few commenters suggested requiring up to 9 CQMs covering a range of 2 to 4 domains. One commenter also advocated for the retention of all three reporting options (1a, 1b, and 2) so that EPs could select the one most appropriate to their practice.

Response: We agree that a modified approach for Option 1 would provide a more optimal reporting schema for most EPs. In our modified approach, we included the positive and minimized the negative components of each of the two proposed options where possible. The Option 1 that we are finalizing (as explained in detail later) decreases the number of CQMs that EPs must select to report, decreases the total number of domains required to be covered among the selected CQMs, recommends but does not require reporting from a ''core'' set of CQMs, and offers specialist EPs the flexibility to select CQMs that are applicable to their scope of practice.

We note the following CQMs in the finalized recommended core sets for adults and children were included in the proposed core set: NQF 0018, 0022, 0024, 0028, 0418, and TBD—Closing the referral loop: receipt of specialist report.

Comment: We also received many comments on Option 2. Numerous commenters supported Option 2, including the submission of CQM data via the PQRS program and receiving credit for both PQRS and meaningful use. However, some of these commenters indicated that not all EPs qualify to participate in PQRS. Another concern was that the patient population reported differs between the two programs in that PQRS requires reporting on Medicare patients only, whereas meaningful use reflects all patients without regard to payer.

Response: For the reporting of CQMs, we are finalizing Option 2 as proposed in order to reduce reporting burden on EPs who participate in both programs and attain the goal of alignment with the PQRS EHR reporting option. EPs who do not participate in PQRS may submit CQMs for the EHR Incentive Program using Option 1. Regardless of whether an EP chooses Option 1 or Option 2 for CQM reporting, we note that all EPs must also report the meaningful use objectives and measures through attestation, as well as meet all other meaningful use requirements.

We acknowledge that under the PQRS, only Medicare patient information is submitted. In general, our preference is to measure quality at the all patient level, based on samples of all patient data (that is, patients that meet the denominator criteria of each reported CQM). We believe this provides a better assessment of overall care quality rendered by EPs. However, although meaningful use reflects all patients without regard to payer, we believe Option 2 is appropriate because it is a step in the direction of the longer-term goal of a single, aligned mechanism for multiple CMS programs.

After consideration of the public comments received, and for the reasons discussed earlier, we are finalizing two reporting options beginning with CY 2014 for EPs in all stages of meaningful use. These options will continue to apply in the event that we have not engaged in another round of rulemaking by CY 2016.

Option 1: Report 9 CQMs covering at least 3 domains.

Medicare and Medicaid EPs selecting this reporting option will be required to submit a total of 9 CQMs covering at least 3 domains from Table 7. We expect EPs would select the CQMs that best apply to their scope of practice and/or unique patient population. For this reporting option, CQMs will be submitted on an aggregate basis reflective of all patients without regard to payer. We are not requiring the submission of a core set of CQMs, but we identify two recommended core sets, one for adults and one for children, that we encourage EPs to report to the extent those CQMs are applicable to an EP's scope of practice and patient population. If an EP's CEHRT does not contain patient data for at least 9 CQMs covering at least 3 domains, then the EP must report the CQMs for which there is patient data and report the remaining required CQMs as ''zero denominators'' as displayed by the EP's CEHRT. If there are no CQMs applicable to the EP's scope of practice and patient population, EPs must still report 9 CQMs even if zero is the result in either the numerator or the denominator of the measure. If all applicable CQMs have a value of zero from their CEHRT, then EPs must report any 9 CQMs from Table 7.

Option 2: Submit and satisfactorily report CQMs under the PQRS's EHR Reporting Option.

Under this option, Medicare EPs who participate in both the PQRS and the Medicare EHR Incentive Program will satisfy the CQM reporting component of meaningful use if they submit and satisfactorily report PQRS CQMs under the PQRS's EHR reporting option using CEHRT. EPs choosing to report under this option for purposes of the Medicare EHR Incentive Program will be subject to the reporting periods established for the PQRS EHR reporting option, which may be different from their EHR reporting period for the meaningful use objectives and measures. For example, in CY 2014, an EP who is beyond his or her first year of meaningful use will have a 3-month quarter EHR reporting period for the meaningful use objectives and measures, but the reporting periods for the PQRS EHR reporting option that fall within CY 2014 would apply for purposes of reporting CQMs. We emphasize that EPs who are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year cannot choose this Option 2 for reporting CQMs for the EHR Incentive Program. For purposes of avoiding a payment adjustment, they must submit their CQM data by attestation no later than October 1 of such preceding year. For more information on the requirements of the PQRS, we refer readers to 42 CFR 414.90 and the CY 2013 Medicare PFS proposed rule (77 FR 44805 through 44988). EPs who choose this option to satisfy the CQM reporting component of meaningful use under the Medicare EHR Incentive Program will be required to comply with any changes to the PQRS that may apply in future years.

(ii) CQMs

We proposed to remove three CQMs beginning with CY 2014 for EPs at all stages of meaningful use for the following reasons:

- NQF # 0013—The measure steward did not submit this CQM to the NQF for continued endorsement. We included other CQMs that address high blood pressure and hypertension in Table 8 in the proposed rule.
- NQF #0027—We determined this CQM is very similar to NQF #0028 a and b; therefore, to avoid duplication, we proposed to only retain NQF # 0028 a and b.
- NQF #0084—The measure steward did not submit this CQM to the NQF for continued endorsement. Additionally,

CMS has decided to remove this CQM because there are other FDA-approved anticoagulant therapies available in addition to Warfarin. We proposed to replace this measure, pending availability of electronic specifications, with NQF #1525—Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy.

We did not receive public comments and are finalizing the elimination of measures NQF #0013, NQF #0027, and NQF #0084 beginning with CY 2014 for EPs at all stages of meaningful use. We proposed to replace NQF #0084 with NQF #1525, which was determined to contain data elements that were difficult to capture in EHRs after additional feasibility testing. Therefore, we are implementing an Adverse Drug Events CQM to replace NQF #0084:

Title: ADE Prevention and Monitoring: Warfarin Time in Therapeutic Range.

Description: Average percentage of time in which individuals with atrial fibrillation who are on chronic anticoagulation have International Normalized Ratio (INR) test results within the therapeutic range during the measurement period.

For a list of all the CQMs proposed for EPs to report for the EHR Incentive Programs beginning with CY 2014, please refer to Table 8 in the Stage 2 proposed rule (77 FR 13749 to 13757). We stated that we expected to finalize only a subset of the CQMs listed in Table 8 based on public comments and the priorities discussed in section II.B.3. of the proposed rule.

We noted that some of these CQMs had not yet been submitted for consensus endorsement consideration or were under review for endorsement consideration by the NQF. We stated that we expect that any measure proposed in Table 8 for inclusion beginning with CY 2014 would be submitted for endorsement consideration by the measure steward. Because measure specifications may need to be updated more frequently than our expected rulemaking cycle will allow for, we stated that we would provide updates to the specifications at least 6 months prior to the beginning of the calendar year for which the measures would be required, and we expected to update specifications annually.

Comment: Many commenters indicated support for CMS's efforts to include CQMs that are broadly applicable across primary care and specialist EPs. However, many commenters also stated that most of the proposed CQMs apply to primary care practices and preventive medicine and requested more CQMs that apply to specialist practices or to adjust the reporting requirements to match the number of clinically available CQMs for nonprimary care EPs. Another commenter requested pediatricians be excluded from having to report on CQMs for patients older than 18 years old rather than having to demonstrate zero denominators on a population that does not apply to them.

Many commenters stated that there were too many CQMs, citing issues with implementation of such a large set of measures as well as diluting the impact of quality measurement. Some of these commenters believed that CMS should focus on a smaller set of CQMs to refine for accuracy in implementation. They also did not believe that they should have to build CQMs into their CEHRT if those CQMs did not apply to their scope of practice because those CQMs would only yield zero denominators. Some suggested alternatives to building out all CQMs included allowing EPs to attest to having a low denominator, such as 25 or fewer patients, or for CMS to assign the primary care or specialty fields that each CQM applies to, whereby EPs whose field is not listed for a particular CQM would be exempt from reporting that CQM.

Many of the proposed EP CQMs received support from the public. Some commenters gave feedback on specific proposed CQMs, including questions on the feasibility of reporting the CQM, issues with specific requirements of the CQM, and preferences for preventative CQMs. A few commenters did not support finalizing CQMs that were not NQF endorsed. We also received suggestions for additional CQMs that were not included in the list of 125 proposed EP CQMs. A few commenters expressed concern about the lack of transparency in the development of the CQMs.

Response: We stated in the Stage 2 proposed rule that we would be finalizing a subset of the proposed CQMs. We convened a Quality Measures Task Force (QMTF), which is made up of stakeholders from across the Department and includes representation from different quality reporting programs. Through the QMTF and with senior leadership, we considered public comments, feasibility of the electronic specifications to be captured in EHRs, and the goals stated in section II.B.3. of this final rule when selecting the finalized list of EP CQMs. By including such a large representation of stakeholders, we believe that we have prioritized CQMs that align with other programs, which includes CQMs that are not used in other programs currently but could be implemented in other programs as they include more electronically specified CQMs in their respective CQM lists. This will move us closer to our longer-term goal of having a single, aligned mechanism for CQM reporting.

Since the measure stewards are responsible for any information that affects the requirements of the CQM, we have shared the feedback on specific CQMs with the respective measure stewards. Consideration of both evidence and expert consensus are integral parts of the NQF's measure endorsement process. More information on this Consensus Development Process is available on the NQF Web site: *http://www.qualityforum.org/Measuring_Performance/Consensus_Development_Process.aspx.* Although we give preference to CQMs that have been endorsed by NQF, section 1848(o)(2)(B)(i)(I) of the Act does not require the selection of NQF-endorsed CQMs for the EHR Incentive Program. Please refer to section II.B.3. of this final rule for the discussion on criteria for inclusion of a CQM.

We appreciate the commenters' suggestions for additional CQMs that apply to specialties that may not have been as represented in the measure set as primary care or preventative medicine. Although we cannot in this final rule select CQMs that were not proposed in the proposed rule, we will consider the suggested CQMs for future inclusion. As for the commenters' request to adjust the reporting requirements or exclude certain specialties from reporting certain CQMs, we believe that our policy on allowing ''zero denominators'' to be reported allows specialists to meet the CQM reporting requirements of meaningful use and is a continuation of our policy from the Stage 1 final rule.

Comment/Response: Table 7 summarizes the public comments received on specific proposed EP CQMs and the CMS rationale (that is, our response to the CQM-specific comment(s)) for finalizing or not finalizing the CQM for reporting beginning with CY 2014.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0002	No comments	No comments	Yes	Addresses efficient use of resources; alignment with other programs.
NQF 0004	Supports measure	Privacy concerns; concerned that it could be difficult to implement.	Yes	Addresses high priority agency goals and aligns with other quality reporting programs. We retained NQF 0004 in order to represent the important issue of alcohol or other drug dependence treatment in our measure set. We also believe that through our collaboration with ONC, we have addressed the issues associated with data collection.
NQF 0018	Public comment supports measure.	No comments	Yes	Supports high priority goals (controlling high blood pressure).
NQF 0022	No comments	Measure is not supported by evidence.	Yes	Addresses patient safety. NQF requires clinical evidence supporting a measure in order to achieve NQF endorsement.
NQF 0024	Support for measure but evidence only for overweight, obese, or underweight children and not ideal weight.	Contains data elements that are difficult to capture as structured data.	Yes	Supports high priority goals (weight assessment, nutrition, physical activity for children); received strong public support. Based on industry standards, CMS is collaborating with other federal agencies and private organizations to standardize data elements.
NQF 0028	Support for measure	Concerns about capturing discrete data.	Yes	Supports high priority goals (tobacco use cessation); alignment with other programs.
NQF 0031	No comments	Does not align with current clinical guidelines for frequency of screening.	Yes	This CQM is currently NQF endorsed.# This is a high priority prevention measure for breast cancer.
NQF 0032	No comments	Does not align with current clinical guidelines for frequency of screening.	Yes	This CQM is currently NQF endorsed# and will be updated for consistency with clinical guidelines as discussed earlier in this section. This is a high priority prevention measure for cervical cancer.
NQF 0033	No comments	Does not align with current clinical guidelines for frequency of screening.	Yes	This CQM is currently NQF endorsed# and will be updated for consistency with clinical guidelines as discussed earlier in this section. This is a high priority prevention measure.
NQF 0034	No comments	Does not align with current clinical guidelines.	Yes	This CQM is currently NQF endorsed# and will be updated for consistency with clinical guidelines as discussed earlier in this section. This is a high priority prevention measure.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0036	No comments	Duplicative of other measures (duplicate measure not included).	Yes	Addresses high priority agency goals and aligns with other quality reporting programs. Some aspects of this measure may be considered duplicative of other CQMs, however we believe that there are unique aspects of this CQM that are important to measure.
NQF 0038	Supports measures to reduce rate of Hepatitis B.	No comments	Yes	Supports public health goals.
NQF 0041	Support for measure	No evidence to support influenza vaccinations for all patients; Concerns about capturing discrete data and accounting for alternative delivery locations.	Yes	This CQM is currently NQF endorsed.# This is a high priority prevention measure. Delivery of the vaccine should be captured in the EHR even if it was delivered in an alternate location.
NQF 0043	Support for measure	Concerns about capturing discrete data and accounting for alternative delivery locations.	Yes	Alignment with PQRS/ACOs/NCQA–PCMH Accreditation. This is a high priority prevention measure. Delivery of the vaccine should be captured in the EHR even if it was delivered in an alternate location. Passed feasibility testing for the data elements needed.
NQF 0052	Support with suggestions for improvements.	No comments	Yes	Addresses efficient use of resources.
NQF 0055	No comments	Inconsistent with evidence	Yes	This CQM is currently NQF endorsed.# This is a high priority prevention measure.
NQF 0056	Support for measure	Concerns about ability to collect discrete data.	Yes	Supports high priority goals (diabetes); alignment with other programs. Passed feasibility testing for the data elements needed.
NQF 0059	Support for measure	No comments	Yes	Supports high priority goals (diabetes); alignment with other programs.
NQF 0060	Support for measure	Concern that this measure is untested in a pediatric population.	Yes	Supports high priority goals (diabetes, pediatric population).
NQF 0062	Supports measure	No comments	Yes	Supports high priority goals (diabetes); alignment with other programs.
NQF 0064	Supports measure as a way to monitor overuse and non-evidence based therapies.	No comments	Yes	Supports high priority goals (diabetes); alignment with other programs.
NQF 0068	Support for measure	No comments	Yes	Supports high priority goals (heart disease); alignment with other programs.
NQF 0069	No comments	No comments	Yes	Addresses efficient use of resources; alignment with other programs.
NQF 0070	Support for measure	No comments	Yes	Supports high priority goals (heart disease); alignment with other programs.
NQF 0075	Support for measure	Denominator is complex and ability to capture prior year data is questioned.	Yes	Supports high priority goals (heart disease); alignment with other programs. We are also collaborating very closely with the ONC to ensure that these data are captured within CEHRT.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0081	Support for measure	No comments	Yes	Supports high priority goals (heart disease); alignment with other programs.
NQF 0083	Support for measure	No comments	Yes	Supports high priority goals (heart disease); alignment with other programs.
NQF 0086	Support for measure	Does not advance quality of care.	Yes	This CQM is currently NQF endorsed.#
NQF 0088	Supports measure	Concerned about ability to transmit data between providers.	Yes	Supports high priority goals (diabetes); alignment with other programs. Data is not required to be electronically transmitted between providers.
NQF 0089	Supports measure	Does not advance quality of care; Concerned about ability to transmit data between providers.	Yes	This CQM is currently NQF endorsed.# Communication between eye specialist and the physician who manages diabetes care is important. Data is not required to be electronically transmitted between providers.
NQF 0101	Support for measure	Concerns about ability to collect discrete data.	Yes	Addresses patient safety. Passed feasibility testing for the data elements required.
NQF 0104	Support for measure	Duplicative of other measures; Concerns about ability to collect discrete data.	Yes	Supports public health goals; alignment with other programs. Duplicative measures have not been finalized. Takes initial steps toward collecting discrete data.
NQF 0105	Support for measure	Concerns about suggesting pharmacotherapy over other treatment options.	Yes	This CQM is currently NQF endorsed.#
NQF 0108	No comments	No comments	Yes	Addresses pediatric population.
NQF 0110	Support for measure	Concerns about complexity and confidentiality; Concerns about ability to collect discrete data.	Yes	We are collaborating very closely with the ONC to ensure that these data are captured within CEHRT.
NQF 0384	Support for measure	Concerns about ability to collect discrete data.	Yes	Addresses patient engagement; alignment with other programs.
NQF 0385	Supports measure	Concerns about ability to collect discrete data.	Yes	Addresses high priority agency goals and aligns with other quality reporting programs.
NQF 0387	Support for measure	Concerns about ability to collect discrete data.	Yes	Addresses high priority agency goals and aligns with other quality reporting programs.
NQF 0389	Support for measure	Concerns about complexity; Concerns about ability to collect discrete data.	Yes	We are collaborating very closely with the ONC to ensure that these data are captured within CEHRT.
NQF 0403	Support for measure	Concerns about ability to document AIDS status.	Yes	Addresses high priority agency goals and aligns with other quality reporting programs.
NQF 0405	Support for measure	Concerns about agreement with current clinical guidelines.	Yes	This CQM is currently NQF endorsed# and will be updated for consistency with clinical guidelines as discussed earlier in this section.
TBD (proposed as NQF 0407—HIV/AIDS RNA Control).	Support for measure	Concerns about ability to collect discrete data.	Yes	Alignment with other programs. This CQM will be updated for consistency with the clinical guidelines as discussed earlier in this section.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0418	Support for assessment of depression.	Concern that patient refusal of screening could count against EP; Concerns about ability to collect discrete data.	Yes	Supports public health goals; alignment with other programs. We also recognize that patients may refuse the treatments measured within this CQM, but there are no performance thresholds established for the EHR Incentive Program.
NQF 0419	Support for measure with concerns about ability to capture discrete data.	Too check-boxy and does not advance quality of care.	Yes	This CQM is currently NQF endorsed.[#]
NQF 0421	Support for measure	Too check-boxy and does not advance quality of care; Concerns about ability to collect discrete data.	Yes	Supports public health goals. Alignment with PQRS/ACOs/UDS. This CQM is currently NQF endorsed.[#] Passed feasibility testing for the data elements needed.
NQF 0564	Supports measure that targets high priority condition to Medicare population and will add substantial value to the clinical quality measure set.	No comments	Yes	Addresses patient safety; alignment with other programs.
NQF 0565	Supports measure that targets high priority condition to Medicare population and will add substantial value to the clinical quality measure set.	No comments	Yes	Alignment with other programs.
NQF 0608	No comments	No comments	Yes	Addresses high priority agency goals.
NQF 0710	Supports measure concept but concerned metric is too high.	Privacy concerns	Yes	Addresses high priority agency goals. To protect patient confidentiality and adhere to HIPAA requirements, CMS and all contractors for CMS are held to maintaining and abiding by the IT Security Policy in the transmission of electronic data.
NQF 0712	Supports measure	Privacy concerns; Concerns about ability to collect discrete data.	Yes	Addresses high priority agency goals and takes initial steps towards collecting accurate discrete data. To protect patient confidentiality and adhere to HIPAA requirements, CMS and all contractors for CMS are held to maintaining and abiding by the IT Security Policy in the transmission of electronic data.
TBD (proposed as 1335 Children dental).	Supports measure	Concerns about collecting data via EHR and required changes to workflow; Concerns about ability to collect discrete data.	Yes	Addresses child health and dental measures not previously included in program. We are collaborating very closely with the ONC to ensure that these data are captured within CEHRT.
NQF 1365	Support for measure	Concerns about ability to collect discrete data.	Yes	Supports public health goals; alignment with other programs. Duplicative measures have not been finalized. Takes initial steps toward collecting discrete data.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 1401	No comments	Concerns about linking measure to age of child when measure relates to maternal depression and ability to capture discrete data.	Yes	Addresses public health goals. We are collaborating very closely with the ONC to ensure that these data are captured within CEHRT.
TBD (proposed as 1419 Primary caries prevention).	Support if revised to clarify numerator and denominator.	Concerns about whether measure reflects standard of care for medical providers.	Yes	Addresses child health and dental measures not previously included in program. Received strong public support. The CQM is currently NQF endorsed for medical providers.[#]
TBD (LDL)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses high priority goal (high cholesterol); Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (Fasting LDL)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses high priority goal (high cholesterol); Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (Dementia)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses high priority agency goals and takes initial steps towards collecting accurate discrete data; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (Hypertension)	No comments	No comments	Yes	Addresses high priority goal (hypertension).
TBD (Closing referral loop)	Supports as an example of a core measure.	Concerns about ability to capture data exchange; not NQF endorsed.	Yes	Addresses care coordination; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (FSA knee)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses functional status assessment and patient engagement; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (FSA hip)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses functional status assessment and patient engagement; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
TBD (FSA complex)	Supports measure	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses functional status assessment and patient engagement; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (ADE)	Supports	Not NQF endorsed; Concerns about ability to collect discrete data.	Yes	Addresses patient safety; Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
TBD (HBP followup)	No comments	Measure focuses on limited population; not NQF endorsed.	Yes	Addresses high priority goals (hypertension); Though we gave preference to NQF endorsement, some measures selected that were not NQF endorsed based on their measurement of high priority conditions.
NQF 0001	Supports measure	Does not advance quality of care; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0012	Measure could be adapted to use EHRs to create more accurate quality measures.	No comments	No	Measure no longer supported by measure steward.
NQF 0014	No comments	Does not advance quality of care.	No	Measure no longer supported by measure steward.
NQF 0045	No comments	Measure is untested in part of population age range; focus on communications instead of outcomes.	No	Difficulty ensuring accurate and standard data collected.
NQF 0046	Supports measure	Concerns about ability to collect discrete data.	No	Difficulty ensuring accurate and standard data collected.
NQF 0047	Supports measure	Measure is complicated; concern about lack of look back period.	No	Difficulty ensuring accurate and standard data collected.
NQF 0048	Supports measure with suggested changes.	No comments	No	Difficulty ensuring accurate and standard data collected.
NQF 0050	Supports measure	Does not advance quality of care; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0051	Supports measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0058	No comments	Definition of condition too restrictive.	No	Concur with public comment that acute bronchitis is too restrictive for an antibiotic overuse CQM. Seek to limit measure set to reduce burden.
NQF 0061	Support for measure	No comments	No	Redundant with other measures assessing condition (e.g., NQF 0018).
NQF 0066	Support for measure	Measure contains two diagnoses and should separated into two measures; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0067	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0073	Support for measure and suggestion to adapt to further exploit EHRs.	No comments	No	Redundant with other measures assessing condition (e.g., NQF 0018).

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0074	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0097	Support for measure	Measure does not advance quality of care, too ''check boxy,'' reconciling across care settings; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0098	Support for measure	Measure is vague; ability to capture discrete data; need standardized tool for assessment; no evidence interventions support outcomes.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0100	Support for measure	No evidence interventions support outcomes; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0102	Support for measure	Concerns about ability to collect discrete data and calculate measure.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0103	Support for measure; harmonize with other measures.	Does not advance quality of care; privacy issues; Concerns about ability to collect discrete data.	No	Concur with concerns in public comments.
NQF 0106	Support for measure	Measure is too complex; concerns about ability to collect discrete data.	No	Concur with concerns in public comments that the measure is too complex; and agree with the concerns about ability to collect discrete data.
NQF 0107	No comments	Duplicative of other measures	No	Concur with concerns in public comments that it is duplicative of other measures.
NQF 0112	Support for measure	Measure is too complex; privacy issues; vague; concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0239	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
Former NQF 0246	Support for measure	Does not advance quality of care; not NQF endorsed; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0271	Support for measure	Questions if appropriate for ambulatory setting; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0312	Support for measure	Measure is vague	No	Difficulty ensuring accurate and standard data collected.
NQF 0321	Support for measure	No comments	No	Complexity associated with collecting discrete data.
NQF 0322	Support for measure	Measure is vague; concerns about ability to capture discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0323	Support for measure	Interoperability concerns	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0382	Support for measure	Concerns about ability to capture numerator data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0383	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0388	Support for measure	Concerns about ability to collect discrete data.	No	Measure retired by steward.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
NQF 0399	Support for measure	No comments	No	Seek to limit measure set to reduce burden.
NQF 0400	Support for measure	No comments	No	Seek to limit measure set to reduce burden.
NQF 0401	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0406	Support for measure	Concerns about keeping up-to-date with changing guidelines.	No	Concur with concerns from public comments with concerns about keeping up-to-date with changing guidelines.
NQF 0507	Support for measure	Does not advance quality of care.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0508	Support for measure	Inability to capture screening results as discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0510	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0513	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0519	Support for measure	Does not advance quality of care; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0561	Support for measure; supports care coordination and alignment with PQRS.	Does not advance quality of care; Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0562	Support for measure	Concerns about ability to collect discrete data; important measure of overuse.	No	Concur with public comment and complexity associated with collecting discrete data.
NQF 0575	Support for measure with reasonable target regarding potential adverse effects of tight diabetes control.	No comments	No	Concur with concerns in public comments regarding potential adverse effects of tight diabetes control.
NQF 0711	Supports measure concept but concerned metric is too high.	Potentially duplicative; privacy issues.	No	Concur with concerns in public comments about potentially duplicative measure; and privacy issues.
NQF 1525	Support for measure	Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Risk Assessment for Falls).	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Plan of Care for Falls)	Support for measure	Not NQF endorsed; questions evidence base for plan of care for falls.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (ADK: BP Mgmt)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (ADK: ESA)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Wound Wet to Dry)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Dementia Staging)	Support for measure	Not NQF endorsed; does not advance quality of care. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.

TABLE 7—SUMMARY OF EP CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	Rationale
TBD (Dementia FSA)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Dementia Safety)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Dementia Driving)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Dementia Caregiver)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Wound Compression)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (RA: FSA)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Glaucoma)	No comments	Not NQF endorsed	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Wound Diabetic)	Support for measure	Not NQF endorsed. Concerns about ability to collect discrete data.	No	Concur with public comment and complexity associated with collecting these discrete data.
TBD (Hypertension: BPM)	No comments	Not NQF endorsed; questions appropriateness due to narrow population.	No	Prefer CQMs on the topic of hypertension with NQF endorsement.

[#] NQF endorsement includes a consensus development process that takes into account clinical guidelines and scientific evidence. NQF describes its consensus development process at *http://www.qualityforum.org/Measuring_Performance/Consensus_Development_Process.aspx*.

After consideration of the public comments received and the CQM selection criteria discussed, we are finalizing the list of 64 CQMs for EPs included in Table 7. We note that the CQMs that do not have a CQM number in Table 7 are those that are not NQF endorsed. EPs will identify these CQMs by the eMeasure ID and version number that will be included in the CQM specifications that will be made available on our Web site.

We also note that three of the CQMs listed with a CQM number of TBD in Table 7 were proposed with NQF numbers but are changed to ''TBD'' in this final rule as follows:

- NQF 0407 is now HIV/AIDS: RNA control for Patients with HIV
- NQF 1335 is now Children who have dental decay or cavities
- NQF 1419 is now Primary Caries Prevention Intervention as Part of Well/Ill Child Care as Offered by Primary Care Medical Providers

NQF 0407 referenced antiretroviral therapy as the means for RNA control. This CQM is scheduled for NQF review and, due to changing clinical guidelines regarding therapies, significant change in this measure is expected. Due to the nature of HIV/AIDS, the virus mutates frequently, necessitating frequent changes in clinical guidelines with respect to treatments. By respecifying the CQM to remove antiretroviral therapy as the specific treatment and only focus on the outcome of RNA control, the intent of this CQM remains the same. The respecified CQM will be submitted to NQF for endorsement. NQF 1335 was endorsed as population-based CQMs rather than individual provider-level CQMs and will be respecified to include individual provider reporting, and NQF 1419 was endorsed at the individual provider level but only for primary care physicians and will be respecified to include dental providers. Both will undergo additional testing, and the results for each CQM will be submitted to NQF to determine whether the respecification warrants a new NQF number. However, the intent of each of these CQMs will remain the same as proposed.

The CQMs finalized in the recommended core sets are included in Table 7 and are denoted with a ''*'' for adult populations (9 CQMs) and ''**'' for pediatric populations (9 CQMs). We believe this approach supports the NQS and provides flexibility for specialists whose scope of practice may not be adequately represented in the proposed core CQM set. Controlling blood pressure has been and continues to be a high priority goal in many national health initiatives, including the Million Hearts campaign. Therefore, we emphasize the importance of reporting NQF #0018 as a primary recommended core CQM. We will monitor reporting on NQF #0018 and consider ways to increase its reporting. This may include, through future rulemaking, requiring EPs in relevant specialties such as primary care and cardiovascular care to report this CQM. We note that the designation of being recommended for

the adult population or pediatric population does not limit an EP from reporting the CQM only for those populations as long as the patients still fit the criteria to be included in the measure (for example, the CQM numbered ''TBD—Closing the referral loop: receipt of specialist report'' is designated as a recommended core CQM for adult populations, but it can apply to pediatric populations as well).

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0002**	Title: Appropriate Testing for Children with Pharyngitis. Description: Percentage of children 2–18 years of age who were diagnosed with pharyngitis, ordered an antibiotic and received a group A streptococcus (strep) test for the episode.	National Committee for Quality Assurance (NCQA) Contact information: *www.ncqa.org*.	EHR PQRS, CHIPRA.		Efficient Use of Healthcare Resources.
NQF 0004	Title: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment. Description: Percentage of patients 13 years of age and older with a new episode of alcohol and other drug (AOD) dependence who received the following. Two rates are reported. a. Percentage of patients who initiated treatment within 14 days of the diagnosis. b. Percentage of patients who initiated treatment and who had two or more additional services with an AOD diagnosis within 30 days of the initiation visit.	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, HEDIS, state use, ACA 2701, NCQA–PCMH Recognition.		Clinical Process/Effectiveness.
NQF 0018*	Title: Controlling High Blood Pressure Description: Percentage of patients 18–85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90mmHg) during the measurement =period.	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, ACO, Group Reporting PQRS, UDS.		Clinical Process/Effectiveness.
NQF 0022*	Title: Use of High-Risk Medications in the Elderly Description: Percentage of patients 66 years of age and older who were ordered high-risk medications. Two rates are reported. a. Percentage of patients who were ordered at least one high-risk medication. b. Percentage of patients who were ordered at least two different high-risk medications.	NCQA *Contact Information: www.ncqa.org*.	PQRS	New	Patient Safety
NQF 0024**	Title: Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents. Description: Percentage of patients 3–17 years of age who had an outpatient visit with a Primary Care Physician (PCP) or Obstetrician/Gynecologist (OB/GYN) and who had evidence of the following during the measurement period. Three rates are reported. • Percentage of patients with height, weight, and body mass index (BMI) percentile documentation. • Percentage of patients with counseling for nutrition. • Percentage of patients with counseling for physical activity.	NCQA *Contact information: www.ncqa.org*.	EHR PQRS, UDS		Population/Public Health.
NQF 0028*	Title: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention. Description: Percentage of patients aged 18 years and older who were screened for tobacco use one or more times within 24 months AND who received cessation counseling intervention if identified as a tobacco user.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS, ACO, Group Reporting PQRS, UDS.		Population/Public Health.
NQF 0031	Title: Breast Cancer Screening Description: Percentage of women 40–69 years of age who had a mammogram to screen for breast cancer.	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, ACO, Group Reporting PQRS, ACA 2701, HEDIS, state use, NCQA–PCMH Recognition.		Clinical Process/Effectiveness.
NQF 0032	Title: Cervical Cancer Screening Description: Percentage of women 21–64 years of age, who received one or more Pap tests to screen for cervical cancer.	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, ACA 2701, HEDIS, state use, NCQA–PCMH Recognition, UDS.		Clinical Process/Effectiveness.
NQF 0033**	Title: Chlamydia Screening for Women Description: Percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement period.	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, CHIPRA, ACA 2701, HEDIS, state use, NCQA–PCMH Recognition.		Population/Public Health.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0034	Title: Colorectal Cancer Screening Description: Percentage of adults 50–75 years of age who had appropriate screening for colorectal cancer.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, ACO, Group Reporting PQRS, NCQA–PCMH Recognition.		Clinical Process/Effectiveness.
NQF 0036**	Title: Use of Appropriate Medications for Asthma Description: Percentage of patients 5–64 years of age who were identified as having persistent asthma and were appropriately prescribed medication during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS		Clinical Process/Effectiveness.
NQF 0038**	Title: Childhood Immunization Status Description: Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV), one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (Hep B); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, UDS		Population/Public Health.
NQF 0041	Title: Preventative Care and Screening: Influenza Immunization. Description: Percentage of patients aged 6 months and older seen for a visit between October 1 and March 31 who received an influenza immunization OR who reported previous receipt of an influenza immunization.	AMA–PCPI *Contact Information: cpe@ama-assn.org.*	EHR PQRS, ACO, Group Reporting PQRS.		Population/Public Health.
NQF 0043	Title: Pneumonia Vaccination Status for Older Adults. Description: Percentage of patients 65 years of age and older who have ever received a pneumococcal vaccine.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, ACO, Group Reporting PQRS, NCQA–PCMH Recognition.		Clinical Process/Effectiveness.
NQF 0052*	Title: Use of Imaging Studies for Low Back Pain Description: Percentage of patients 18–50 years of age with a diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of the diagnosis.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS		Efficient Use of Healthcare Resources.
NQF 0055	Title: Diabetes: Eye Exam Description: Percentage of patients 18–75 years of age with diabetes who had a retinal or dilated eye exam by an eye care professional during the measurement period or a negative retinal exam (no evidence of retinopathy) in the 12 months prior to the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0056	Title: Diabetes: Foot Exam Description: Percentage of patients aged 18–75 years of age with diabetes who had a foot exam during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0059	Title: Diabetes: Hemoglobin A1c Poor Control Description: Percentage of patients 18–75 years of age with diabetes who had hemoglobin A1c >9.0% during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, ACO, Group Reporting PQRS, UDS.		Clinical Process/Effectiveness.
NQF 0060	Title: Hemoglobin A1c Test for Pediatric Patients Description: Percentage of patients 5–17 years of age with diabetes with an HbA1c test during the measurement period.	NCQA Contact Information: *www.ncqa.org.*		New	Clinical Process/Effectiveness.
NQF 0062	Title: Diabetes: Urine Protein Screening Description: The percentage of patients 18–75 years of age with diabetes who had a nephropathy screening test or evidence of nephropathy during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0064	Title: Diabetes: Low Density Lipoprotein (LDL) Management. Description: Percentage of patients 18–75 years of age with diabetes whose LDL–C was adequately controlled (<100 mg/dL) during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	PQRS, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0068	Title: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic. Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had documentation of use of aspirin or another antithrombotic during the measurement period.	NCQA *Contact Information: www.ncqa.org.*	EHR PQRS, ACO, Group Reporting PQRS.		Clinical Process/Effectiveness.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0069 **	Title: Appropriate Treatment for Children with Upper Respiratory Infection (URI). Description: Percentage of children 3 months–18 years of age who were diagnosed with upper respiratory infection (URI) and were not dispensed an antibiotic prescription on or three days after the episode.	NCQA Contact Information: *www.ncqa.org*.	PQRS, NCQA–PCMH Recognition.	New	Efficient Use of Healthcare Resources.
NQF 0070	Title: Coronary Artery Disease (CAD): Beta-Blocker Therapy—Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%). Description: Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have a prior MI or a current or prior LVEF <40% who were prescribed beta-blocker therapy.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS, NCQA–PCMH Recognition.		Clinical Process/Effectiveness.
NQF 0075	Title: Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control. Description: Percentage of patients 18 years of age and older who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) in the 12 months prior to the measurement period, or who had an active diagnosis of ischemic vascular disease (IVD) during the measurement period, and who had a complete lipid profile performed during the measurement period and whose LDL–C was adequately controlled (<100 mg/dL).	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, ACO, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0081	Title: Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD). Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) <40% who were prescribed ACE inhibitor or ARB therapy either within a 12 month period when seen in the outpatient setting OR at each hospital discharge.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS, Group Reporting PQRS, NCQA–PCMH Recognition.		Clinical Process/Effectiveness
NQF 0083	Title: Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD). Description: Percentage of patients aged 18 years and older with a diagnosis of heart failure (HF) with a current or prior left ventricular ejection fraction (LVEF) <40% who were prescribed beta-blocker therapy either within a 12 month period when seen in the outpatient setting OR at each hospital discharge.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS, ACO, Group Reporting PQRS.		Clinical Process/Effectiveness.
NQF 0086	Title: Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation. Description: Percentage of patients aged 18 years and older with a diagnosis of POAG who have an optic nerve head evaluation during one or more office visits within 12 months.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS		Clinical Process/Effectiveness.
NQF 0088	Title: Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy. Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS		Clinical Process/Effectiveness.
NQF 0089	Title: Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care. Description: Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS		Clinical Process/Effectiveness.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0101	Title: Falls: Screening for Future Fall Risk Description: Percentage of patients 65 years of age and older who were screened for future fall risk during the measurement period.	AMA–PCPI Contact Information: *cpe@ama-assn.org;* NCQA Contact Information: *www.ncqa.org*.	PQRS, ACO, Group Reporting PQRS.	New	Patient Safety.
NQF 0104	Title: Major Depressive Disorder (MDD): Suicide Risk Assessment. Description: Percentage of patients aged 18 years and older with a new diagnosis or recurrent episode of MDD who had a suicide risk assessment completed at each visit during the measurement period.	AMA–PCPI Contact Information: *cpe@ama-assn.org*.	PQRS	New	Clinical Process/Effectiveness.
NQF 0105	Title: Anti–depressant Medication Management Description: Percentage of patients 18 years of age and older who were diagnosed with major depression and treated with antidepressant medication, and who remained on antidepressant medication treatment. Two rates are reported. a. Percentage of patients who remained on an antidepressant medication for at least 84 days (12 weeks). b. Percentage of patients who remained on an antidepressant medication for at least 180 days (6 months).	NCQA *Contact Information: www.ncqa.org*.	EHR PQRS, HEDIS, state use, ACA 2701.		Clinical Process/Effectiveness.
NQF 0108**	Title: ADHD: Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder (ADHD) Medication. Description: Percentage of children 6–12 years of age and newly dispensed a medication for attention-deficit/hyperactivity disorder (ADHD) who had appropriate follow-up care. Two rates are reported. a. Percentage of children who had one follow-up visit with a practitioner with prescribing authority during the 30-Day Initiation Phase. b. Percentage of children who remained on ADHD medication for at least 210 days and who, in addition to the visit in the Initiation Phase, had at least two additional follow-up visits with a practitioner within 270 days (9 months) after the Initiation Phase ended.	NCQA Contact Information: *www.ncqa.org*.		New	Clinical Process/Effectiveness.
NQF 0110	Title: Bipolar Disorder and Major Depression: Appraisal for alcohol or chemical substance use. Description: Percentage of patients with depression or bipolar disorder with evidence of an initial assessment that includes an appraisal for alcohol or chemical substance use.	Center for Quality Assessment and Improvement in Mental Health (CQAIMH) Contact Information: *www.cqaimh.org; cqaim-h@cqaimh.org*.	NCQA–PCMH Recognition.	New	Clinical Process/Effectiveness.
NQF 0384	Title: Oncology: Medical and Radiation—Pain Intensity Quantified. Description: Percentage of patient visits, regardless of patient age, with a diagnosis of cancer currently receiving chemotherapy or radiation therapy in which pain intensity is quantified.	AMA–PCPI Contact Information: *cpe@ama-assn.org*.	PQRS	New	Patient and Family Engagement.
NQF 0385	Title: Colon Cancer: Chemotherapy for AJCC Stage III Colon Cancer Patients. Description: Percentage of patients aged 18 through 80 years with Stage III colon cancer who are referred for adjuvant chemotherapy, prescribed adjuvant chemotherapy, or have previously received adjuvant chemotherapy within the 12-month reporting period.	AMA–PCPI *Contact Information:* cpe@ama-assn.org;*American Society of Clinical Oncology (ASCO): www.asco.org*; National Comprehensive Cancer Network (NCCN): *www.nccn.org*.	EHR PQRS		Clinical Process/Effectiveness.
NQF 0387	Title: Breast Cancer: Hormonal Therapy for Stage IC–IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer. Description: Percentage of female patients aged 18 years and older with Stage IC through IIIC, ER or PR positive breast cancer who were prescribed tamoxifen or aromatase inhibitor (AI) during the 12-month reporting period.	AMA–PCPI *Contact Information: cpe@ama-assn.org; ASCO: www.asco.org; NCCN: www.nccn.org*.	EHR PQRS		Clinical Process/Effectiveness.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0389	Title: Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients. Description: Percentage of patients, regardless of age, with a diagnosis of prostate cancer at low risk of recurrence receiving interstitial prostate brachytherapy, OR external beam radiotherapy to the prostate, OR radical prostatectomy, OR cryotherapy who did not have a bone scan performed at any time since diagnosis of prostate cancer.	AMA–PCPI *Contact Information: cpe@ama-assn.org*.	EHR PQRS		Efficient Use of Healthcare Resources.
NQF 0403	Title: HIV/AIDS: Medical Visit Description: Percentage of patients, regardless of age, with a diagnosis of HIV/AIDS with at least two medical visits during the measurement year with a minimum of 60 days between each visit.	AMA–PCPI Contact Information: *cpe@ama-assn.org;* NCQA Contact Information: www.ncqa.org.		New	Clinical Process/Effectiveness.
NQF 0405	Title: HIV/AIDS: Pneumocystis jiroveci pneumonia (PCP) Prophylaxis. Description: Percentage of patients aged 6 weeks and older with a diagnosis of HIV/AIDS who were prescribed Pneumocystis jiroveci pneumonia (PCP) prophylaxis.	AMA–PCPI Contact Information: *cpe@ama-assn.org*; NCQA Contact Information: www.ncqa.org.	PQRS, NCQA–PCMH Recognition.	New	Clinical Process/Effectiveness.
TBD (proposed as NQF 0407).	Title: HIV/AIDS: RNA control for Patients with HIV Description: Percentage of patients aged 13 years and older with a diagnosis of HIV/AIDS, with at least two visits during the measurement year, with at least 60 days between each visit, whose most recent HIV RNA level is <200 copies/mL.	NCQA Contact Information: www.ncqa.org.	PQRS	New	Clinical Process/Effectiveness.
NQF 0418***	Title: Preventive Care and Screening: Screening for Clinical Depression and Follow-Up Plan. Description: Percentage of patients aged 12 years and older screened for clinical depression on the date of the encounter using an age appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the positive screen.	Centers for Medicare and Medicaid Services (CMS) 1–888–;734–6433 or http://questions.cms.hhs.gov/app/ask/p/21,26,1139; Quality Insights of Pennsylvania (QIP) Contact Information: www.usqualitymeasures.org.	EHR PQRS, ACO, Group Reporting PQRS.	New	Population/Public Health.
NQF 0419*	Title: Documentation of Current Medications in the Medical Record. Description: Percentage of specified visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list *must* include ALL prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND *must* contain the medications' name, dosage, frequency and route of administration.	Centers for Medicare and Medicaid Services (CMS) 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*; QIP Contact Information: www.usqualitymeasures.org.	PQRS, EHR PQRS	New	Patient Safety.
NQF 0421*	Title: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up. Description: Percentage of patients aged 18 years and older with a calculated BMI in the past six months or during the current reporting period documented in the medical record AND if the most recent BMI is *outside of normal parameters,* a follow-up plan is documented within the past six months or during the current reporting period. Normal Parameters: Age 65 years and older BMI ≥23 and <30. Age 18–64 years BMI ≥18.5 and <25.	Centers for Medicare and Medicaid Services (CMS) 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139;* QIP Contact Information: www.usqualitymeasures.org.	EHR PQRS, ACO, Group Reporting PQRS, UDS.		Population/Public Health.
NQF 0564	Title: Cataracts: Complications within 30 Days Following Cataract Surgery Requiring Additional Surgical Procedures. Description: Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and had any of a specified list of surgical procedures in the 30 days following cataract surgery which would indicate the occurrence of any of the following major complications: retained nuclear fragments, endophthalmitis, dislocated or wrong power IOL, retinal detachment, or wound dehiscence.	AMA–PCPI Contact Information: *cpe@ama-assn.org*; NCQA Contact Information: *www.ncqa.org*.	PQRS	New	Patient Safety.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
NQF 0565	Title: Cataracts: 20/40 or Better Visual Acuity within 90 Days Following Cataract Surgery. Description: Percentage of patients aged 18 years and older with a diagnosis of uncomplicated cataract who had cataract surgery and no significant ocular conditions impacting the visual outcome of surgery and had best-corrected visual acuity of 20/40 or better (distance or near) achieved within 90 days following the cataract surgery.	AMA–PCPI Contact Information: *cpe@ama-assn.org*; NCQA Contact Information: *www.ncqa.org*.	PQRS	New	Clinical Process/Effectiveness.
NQF 0608	Title: Pregnant women that had HBsAg testing Description: This measure identifies pregnant women who had a HBsAg (hepatitis B) test during their pregnancy.	Ingenix Contact Information: www.ingenix.com.		New	Clinical Process/Effectiveness.
NQF 0710	Title: Depression Remission at Twelve Months Description: Adult patients age 18 and older with major depression or dysthymia and an initial PHQ–9 score >9 who demonstrate remission at twelve months defined as PHQ–9 score less than 5. This measure applies to both patients with newly diagnosed and existing depression whose current PHQ–9 score indicates a need for treatment.	Minnesota Community Measurement (MNCM) Contact Information: *www.mncm.org; info@mncm.org*.		New	Clinical Process/Effectiveness.
NQF 0712	Title: Depression Utilization of the PHQ–9 Tool Description: Adult patients age 18 and older with the diagnosis of major depression or dysthymia who have a PHQ–9 tool administered at least once during a 4 month period in which there was a qualifying visit.	MNCM Contact Information: *www.mncm.org; info@mncm.org*.		New	Clinical Process/Effectiveness.
TBD **	Title: Children who have dental decay or cavities Description: Percentage of children ages 0–20, who have had tooth decay or cavities during the measurement period.	Maternal and Child Health Bureau, Health Resources and Services Administration *http://mchb.hrsa.gov/*.		New	Clinical Process/Effectiveness.
NQF 1365	Title: Child and Adolescent Major Depressive Disorder: Suicide Risk Assessment. Description: Percentage of patient visits for those patients aged 6 through 17 years with a diagnosis of major depressive disorder with an assessment for suicide risk.	AMA–PCPI Contact Information: *cpe@ama-assn.org*.		New	Patient Safety.
NQF 1401	Title: Maternal depression screening Description: The percentage of children who turned 6 months of age during the measurement year, who had a face-to-face visit between the clinician and the child during child's first 6 months, and who had a maternal depression screening for the mother at least once between 0 and 6 months of life.	NCQA *Contact Information: www.ncqa.org*.		New	Population/Public Health.
TBD	Title: Primary Caries Prevention Intervention as Offered by Primary Care Providers, including Dentists. Description: Percentage of children, age 0–20 years, who received a fluoride varnish application during the measurement period.	University of Minnesota Contact Information: *www.umn.edu*.		New	Clinical Process/Effectiveness.
TBD	Title: Preventive Care and Screening: Cholesterol—Fasting Low Density Lipoprotein (LDL–C) Test Performed. Description: Percentage of patients aged 20 through 79 years whose risk factors have been assessed and a fasting LDL–C test has been performed.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*; QIP *Contact Information: www.usqualitymeasures.org*.	EHR PQRS	New	Clinical Process/Effectiveness.
TBD	Title: Preventive Care and Screening: Risk-Stratified Cholesterol—Fasting Low Density Lipoprotein (LDL–C). Description: Percentage of patients aged 20 through 79 years who had a fasting LDL–C test performed and whose risk-stratified fasting LDL–C is at or below the recommended LDL–C goal.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*; QIP *Contact Information:* www.usqualitymeasures.org.	EHR PQRS	New	Clinical Process/Effectiveness.
TBD	Title: Dementia: Cognitive Assessment Description: Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period.	AMA–PCPI Contact Information: *cpe@ama-assn.org*.	PQRS	New	Clinical Process/Effectiveness.

TABLE 8—CQMS FINALIZED FOR MEDICARE AND MEDICAID EPS BEGINNING WITH CY 2014—Continued

CQM No.	CQM title and description	Measure steward and contact information	Other quality measure programs that use the same CQM***	New CQM	Domain
TBD	Title: Hypertension: Improvement in blood pressure Description: Percentage of patients aged 18–85 years of age with a diagnosis of hypertension whose blood pressure improved during the measurement period.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Clinical Process/Effectiveness.
TBD*	Title: Closing the referral loop: receipt of specialist report. Description: Percentage of patients with referrals, regardless of age, for which the referring provider receives a report from the provider to whom the patient was referred.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Care Coordination.
TBD	Title: Functional status assessment for knee replacement. Description: Percentage of patients aged 18 years and older with primary total knee arthroplasty (TKA) who completed baseline and follow-up (patient-reported) functional status assessments.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Patient and Family Engagement.
TBD	Title: Functional status assessment for hip replacement. Description: Percentage of patients aged 18 years and older with primary total hip arthroplasty (THA) who completed baseline and follow-up (patient-reported) functional status assessments.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Patient and Family Engagement.
TBD*	Title: Functional status assessment for complex chronic conditions. Description: Percentage of patients aged 65 years and older with heart failure who completed initial and follow-up patient-reported functional status assessments.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Patient and Family Engagement.
TBD	Title: ADE Prevention and Monitoring: Warfarin Time in Therapeutic Range. Description: Average percentage of time in which individuals with atrial fibrillation who are on chronic anticoagulation have International Normalized Ratio (INR) test results within the therapeutic range during the measurement period.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*.		New	Patient Safety.
TBD	Title: Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented. Description: Percentage of patients aged 18 years and older seen during the reporting period who were screened for high blood pressure AND a recommended follow-up plan is documented based on the current blood pressure (BP) reading as indicated.	CMS 1–888–734–6433 or *http://questions.cms.hhs.gov/app/ask/p/21,26,1139*; QIP *Contact Information: www.usqualitymeasures.org*.	PQRS, EHR PQRS, Group Reporting PQRS, ACO.	New	Population/Public Health.

* Recommended Adult Core CQMs for EPs.
** Recommended Pediatric Core CQMs for EPs.
*** PQRS = Physician Quality Reporting System.
EHR PQRS = Physician Quality Reporting System's Electronic Health Record Reporting Option.
CHIPRA = Children's Health Insurance Program Reauthorization Act.
HEDIS = Healthcare Effectiveness Data and Information Set.
ACA 2701 = Affordable Care Act section 2701.
NCQA–PCMH = National Committee for Quality Assurance—Patient Centered Medical Home.
Group Reporting PQRS = Physician Quality Reporting System's Group Reporting Option.
UDS = Uniform Data System (Health Resources Services Administration).
ACO = Accountable Care Organization (Medicare Shared Savings Program).

6. Reporting Methods for CQMs for EPs

(a) Reporting Methods for Medicaid EPs

For Medicaid EPs, we stated in the proposed rule that states are, and will continue in Stage 2 to be, responsible for determining whether and how electronic reporting would occur, or whether they wish to continue to allow reporting through attestation. If a state does require such electronic reporting, the state is responsible for sharing the details of the process with its provider community. We stated that we anticipate that whatever means states have deployed for capturing Stage 1 CQMs electronically would be similar for reporting in CY 2013. However, we note that subject to our prior approval, this is within the states' purview. Beginning in CY 2014, we proposed that the states would establish the method and requirements, subject to CMS prior approval, for the electronic capture and reporting of CQMs from CEHRT.

Comment: Commenters suggested unified Medicaid CQM reporting to reduce the burden on EPs operating in multiple states.

Response: For the purposes of the Medicaid EHR Incentive Program, EPs report CQMs to the state making the EHR incentive payment. However, data from all practice locations that are equipped with CEHRT will be used for reporting CQMs, even if the practice locations are in different states.

After consideration of the public comments received, we are finalizing the policies for electronic reporting of CQMs for Medicaid EPs as proposed. As part of certification for EHR technology, ONC is including testing for data capture, CQM calculation, and electronic submission. For CQMs, this includes certification criteria for the QRDA Category I (QRDA–I) and QRDA Category III (QRDA–III) transmission formats. We expect the states that have electronic reporting options for CQMs might choose to adopt QRDA–I for patient-level data and/or QRDA–III for aggregate data as the form in which EPs would report CQM data. By adopting the same QRDA–I and/or QRDA–III that

CMS is requiring for CQM reporting, the states would be able to leverage the development of the specifications by CMS and the industry as well as the testing done by ONC for certification of EHR technology. This would reduce the burden on EHR vendors to implement and test different specifications.

(b) Reporting Methods for Medicare EPs in CY 2013

In the Stage 2 proposed rule, we did not propose any reporting methods for Medicare EPs in 2013. However, in the CY 2013 Medicare PFS proposed rule (77 FR 44988), we proposed that EPs may continue to report by attestation CQM results as calculated by CEHRT, as they did for 2011 and 2012. For further explanation of reporting CQMs by attestation, please see the Stage 1 final rule (75 FR 44430 through 44434). We also proposed in the CY 2013 Medicare PFS proposed rule (77 FR 44988) to continue the voluntary electronic reporting pilot for CQMs (the PQRS—Medicare EHR Incentive Pilot) for 2013, which we had previously established for 2012. We expect to finalize in the CY 2013 Medicare PFS final rule the reporting methods that would apply in 2013 for EPs participating in the Medicare EHR Incentive Program.

(c) Reporting Methods for Medicare EPs Beginning With CY 2014

Under section 1848(o)(2)(A)(iii) of the Act, EPs must submit information on the CQMs selected by the Secretary ''in a form and manner specified by the Secretary'' as part of demonstrating meaningful use of CEHRT. We proposed that Medicare EPs who are in their first year of Stage 1 may report CQMs through attestation for a continuous 90-day EHR reporting period. We proposed that Medicare EPs who choose Option 1 for reporting CQMs would submit through an aggregate reporting method, which would require the EP to log into a CMS-designated portal and submit through an upload process data produced as output from their CEHRT in an XML-based format specified by CMS. We proposed that Medicare EPs who choose to report CQMs as described in Option 2 would submit in accordance with the requirements of the PQRS program.

Comment: We received several comments on the proposal to use an XML-based format for transmitting aggregate results. Those commenters were generally in favor of using an aggregate XML and that the technical structure aligns with the PQRS registry reporting option. One commenter noted that the aggregate-level standard QRDA–III is not currently mature. Some commenters indicated a preference that the aggregate reporting method should only require submission of one data file instead of multiple files, citing that submitting multiple files is onerous and may not be manageable due to the number of files EPs would need to upload.

Response: We acknowledge that there is currently no consensus standard for the electronic transmission of aggregate results of CQMs. However, the 2014 Edition certification criteria adopt the QRDA–III specification. As a result, we expect to be able to receive data submitted using the QRDA–III specification.

We proposed to consider an ''interim submission'' option for Medicare EPs who are in their first year of Stage 1 and who participate in PQRS. Under this option, EPs would submit the PQRS CQM data for a continuous 90-day EHR reporting period, and the data must be received no later than October 1 to meet the requirements of the EHR Incentive Program. We proposed that the EP would report the remainder of his/her CQM data by the deadline specified for PQRS in order to meet the requirements of the PQRS program. We solicited public comment on this potential option.

Comment: Many commenters indicated the proposed interim submission option for Medicare EPs in their first year of Stage 1 is unclear and would involve a prohibitive amount of effort. The commenters also suggested removing this option. Other commenters supported the interim submission option.

Response: This option was intended to accommodate Medicare EPs who are demonstrating meaningful use for the first time in 2014 and want to choose Option 2 (the PQRS EHR reporting option) for reporting CQMs. As proposed, however, it would require two submissions. We agree with the commenters that the ''interim submission option'' is complex and potentially burdensome. We are not finalizing the interim submission option.

After consideration of the public comments received, we are finalizing the following reporting methods for Medicare EPs beginning in CY 2014:

- Option 1: Aggregate reporting through a CMS-designated electronic transmission method using CEHRT.

The format required for aggregate reporting will be the QRDA–III, which is an XML-based format. The electronic transmission method for aggregate reporting differs from reporting via attestation in that the QRDA–III report would be generated by the EPs CEHRT and transmitted electronically rather than the aggregate results manually input into the Registration and Attestation system. EPs who are in their first year of Stage 1 must report CQMs under Option 1 through attestation (please refer to the Stage 1 final rule for an explanation of reporting CQMs through attestation (75 FR 44430 through 44434)). Consistent with section 1848(o)(2)(B)(ii) of the Act, in the unlikely event that the Secretary does not have the capacity to receive CQM data electronically, EPs who are beyond the first year of Stage 1 may continue to report aggregate CQM results through attestation.

- Option 2: Patient-level reporting via PQRS through the transmission methods established for the PQRS EHR-based reporting mechanisms and using CEHRT.

Please refer to 42 CFR 414.90 and the CY 2013 Medicare PFS proposed rule (77 FR 44988) for more information on the PQRS.

(d) Group Reporting Option for Medicare and Medicaid EPs Beginning With CY 2014

For Stage 1, EPs were required to report the CQMs on an individual basis and did not have an option to report the CQMs as part of a group practice. Under section 1848(o)(2)(A) of the Act, the Secretary may provide for the use of alternative means for EPs furnishing covered professional services in a group practice (as defined by the Secretary) to meet the requirements of meaningful use. Beginning with CY 2014, we proposed three group reporting options to allow EPs within a single group practice to report CQM data on a group level. We proposed that all three methods would be available for Medicare EPs, while only the first one would be possible for Medicaid EPs, at states' discretion.

We proposed each of these options as an alternative to reporting CQM data as an individual EP under the proposed options and reporting methods discussed earlier in this rule. These group reporting options would only be available for reporting CQMs for purposes of the EHR Incentive Program and only if all EPs in the group are beyond the first year of Stage 1. EPs would not be able to use these group reporting options for any of the other meaningful use objectives and associated measures in the EHR Incentive Programs.

The three group reporting options that we proposed for EPs are as follows:

- Two or more EPs, each identified with a unique NPI associated with a group practice identified under one tax

identification number (TIN) may be considered an EHR Incentive Group for the purposes of reporting CQMs for the Medicare EHR Incentive Program. This group reporting option would only be available for electronic reporting of CQMs and would not be available for those EPs in their first year of Stage 1. The CQMs reported under this option would represent all EPs within the group. EPs who choose this group reporting option for CQMs would have to individually satisfy the objectives and associated measures for their respective stage of meaningful use. We proposed that states may also choose this option to accept group reporting for CQMs, based upon a predetermined definition of a ''group practice,'' such as sharing one TIN.

• Medicare EPs participating in the Medicare SSP and the testing of the Pioneer ACO model who use CEHRT to submit ACO measures in accordance with the requirements of the Medicare SSP would be considered to have satisfied their CQM reporting requirement as a group for the Medicare EHR Incentive Program. The Medicare SSP does not require the use of CEHRT. However, all CQM data would have to be extracted from CEHRT in order for the EP to qualify for the Medicare EHR Incentive Program if an EP intends to use this group reporting option. EPs would have to individually satisfy the objectives and associated measures for their respective stage of meaningful use, in addition to submitting CQMs as part of an ACO. EPs who are part of an ACO but do not enter the data used for reporting the CQMs (which excludes the survey tool or claims-based measures that are collected to calculate the quality performance score in the Medicare SSP) into CEHRT would not be able to meet meaningful use requirements. For more information about the requirements of the Medicare SSP, see 42 CFR 425 and the November 2, 2011 final rule (76 FR 67802). EPs who use this group reporting option for the Medicare EHR Incentive Program would be required to comply with any changes to the Medicare SSP that may apply in the future. EPs would be required to be part of a group practice (that is, two or more EPs, each identified with a unique NPI associated with a group practice identified under one TIN) to be able to use this group reporting option.

• Medicare EPs who satisfactorily report PQRS CQMs using CEHRT under the PQRS Group Practice Reporting Option (GPRO), would be considered to have satisfied their CQM reporting requirement as a group for the Medicare EHR Incentive Program. For more information about the PQRS GPRO, see 42 CFR 414.90 and the CY 2012 Medicare PFS final rule (76 FR 73314) and CY 2013 Medicare PFS proposed rule (77 FR 44805 through 44807). EPs who use this group reporting option for the Medicare EHR Incentive Program would be required to comply with any changes to the PQRS GPRO that may apply in the future and would have to individually satisfy the objectives and associated measures for their respective stage of meaningful use.

Comment: We received numerous comments on the proposed group reporting options. Generally, most commenters supported including group reporting. Many commenters indicated group reporting options are consistent with the intent of many of the measures and would promote a more patient focused healthcare experience. A commenter requested clarification regarding whether group reporting was confined to CQMs or other objectives in meaningful use as well. Other commenters requested more detail on how new EPs or EPs leaving group practices might affect reporting and validation. Commenters indicated the requirement that only EPs beyond Stage 1 be able to use this option be eliminated because new providers join practices frequently. A commenter requested that new members of a practice be able to report at the same level that the group is currently reporting. Many commenters requested greater specificity in the final rule and clarification whether all EPs under the same TIN need to submit as a group, or if some can submit as a group and others individually. A commenter recommended that not all EPs under the same TIN should have to have access to CEHRT at all group practice locations. Other commenters stated that the proposed option for group reporting is complex and suggested the files submitted contain only data related to providers within the group or practice that have met the measures. A commenter indicated that the addition of multiple reporting options has made it exceedingly difficult for providers already presented with multiple reporting options across state and federal programs.

Response: We agree with commenters as to the benefits of reporting and measurement at the group level. We believe it can lessen the complexity and burden of reporting and also promote a greater patient focus. Group level reporting can avoid the need for multiple professionals in the same practice to report the same information on single patient that they may each treat. It can promote team work and the recognition that quality care often depends on interplay of multiple professionals rather that solely on a particular individual professional. Therefore, we agree that we should include the option of group reporting of CQMs for the EHR Incentive Program.

With respect to applicability to measures other than CQMs, as proposed the group reporting options in section II.B.6.d. of the proposed rule (77 FR 13758) would apply only to CQM reporting and not to other meaningful use objectives and associated measures. EPs reporting CQMs under a group reporting option must still attest to the meaningful use objectives and associated measures individually or through the batch reporting process we are finalizing in section II.C.1.c of this final rule to successfully demonstrate meaningful use.

As for the three options for group reporting we proposed, we agree with the potential for complexity of group reporting under which different individuals within a group would be treated differently, such as the proposed requirement that all EPs in the group must be beyond their first year of meaningful use. We believe that this would be complex and difficult to operationalize, so we are not finalizing this requirement. We note that for the group reporting option under PQRS and for professionals participating in the Medicare SSP and the testing of the Pioneer ACO model, all individuals within a group are treated as being part of the group for the purposes of quality reporting.

As a result, for the Medicare EHR Incentive Program, we are finalizing the following two group reporting options for the purposes of CQM reporting:

• Medicare EPs participating in the Medicare SSP and the testing of the Pioneer ACO model who use CEHRT to submit ACO CQMs in accordance with the requirements of the Medicare SSP would be considered to have satisfied their CQM reporting requirement as a group for the Medicare EHR Incentive Program.

• Medicare EPs who satisfactorily report PQRS CQMs using CEHRT under the PQRS GPRO would be considered to have satisfied their CQM reporting requirement as a group for the Medicare EHR Incentive Program. Under the CY 2013 Medicare PFS proposed rule, additional group reporting options are proposed. We note that the proposed claims and registry options for GPRO, which do not involve the use of CEHRT, would not satisfy the CQM reporting requirement for the EHR Incentive Program. However, the options for GPRO involving the use of CEHRT, which include submissions from

CEHRT directly to CMS or through a data intermediary to CMS, could satisfy the CQM reporting requirement for the EHR Incentive Program. Under the PQRS GPRO, CQM submission is at the group level, not at the level of any individual EP that is part of the group. Each individual EP who is a member of the group would meet the CQM reporting requirement for the EHR Incentive Program if the group meets the requirements for PQRS, with the exception of the EPs in the group who are in their first year of demonstrating meaningful use as noted later in this section.

We do not finalize any additional requirements beyond those of the programs themselves for group reporting, with the exception that the group must use CEHRT in connection with submitting CQMs. Although a group may include EPs that are demonstrating meaningful use for the first time, we emphasize that these EPs cannot use either of these group reporting options for reporting CQMs for the EHR Incentive Program. CQM data collected by EPs that are part of a group and are in their first year of demonstrating meaningful use could still be part of the group's collective data submission. However, for purposes of avoiding a payment adjustment, EPs who are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year must individually submit their CQM data by attestation no later than October 1 of such preceding year. We encourage EPs who would like to use the group reporting options beginning in 2014 to become meaningful EHR users in 2013. Please see section II.D.2. of this final rule for more details on payment adjustments.

For the Medicaid EHR Incentive Program, the states will have the option to allow group reporting of CQMs through an update to their State Medicaid HIT plan, which must describe how they would address the issue of EPs who switch group practices during an EHR reporting period.

7. CQMs for Eligible Hospitals and Critical Access Hospitals

(a) Statutory and Other Considerations

Sections 1886(n)(3)(A)(iii) and 1903(t)(6)(C) of the Act provide for the reporting of CQMs by eligible hospitals and CAHs as part of demonstrating meaningful use of CEHRT. For further explanation of the statutory requirements, we refer readers to the discussion in our Stage 1 proposed and final rules (75 FR 1870 through 1902 and 75 FR 44380 through 44435, respectively).

Section 1886(n)(3)(B)(i)(I) of the Act requires the Secretary to give preference to CQMs that have been selected for the purpose of applying section 1886(b)(3)(B)(viii) of the Act (that is, measures that have been selected for the Hospital Inpatient Quality Reporting (IQR) Program) or that have been endorsed by the entity with a contract with the Secretary under section 1890(a) of the Act (namely, the NQF). We proposed CQMs for eligible hospitals and CAHs for 2013, 2014, and 2015 (and potentially subsequent years) that reflect this preference, although we note that the Act does not require the selection of such CQMs for the EHR Incentive Programs. CQMs listed in this final rule that do not have an NQF identifying number are not NQF endorsed.

Under section 1903(t)(8) of the Act, the Secretary must seek, to the maximum extent practicable, to avoid duplicative requirements from federal and state governments for eligible hospitals and CAHs to demonstrate meaningful use of CEHRT under Medicare and Medicaid. Therefore, to meet this requirement, we proposed to continue our practice from Stage 1 of proposed CQMs that would apply for both the Medicare and Medicaid EHR Incentive Programs.

In accordance with CMS and HHS quality goals as well as the HHS National Quality Strategy recommendations, the hospital CQMs that we proposed beginning with FY 2014 can be categorized into the following six domains, which are described in section II.B.3. of this final rule:

- Patient & Family Engagement.
- Patient Safety.
- Care Coordination.
- Population & Public Health.
- Efficient Use of Healthcare Resources.
- Clinical Process/Effectiveness.

The selection of CQMs we proposed for eligible hospitals and CAHs was based on statutory requirements, the HITPC's recommendations, alignment with other CMS and national hospital quality measurement programs such as the Joint Commission, the Medicare Hospital Inpatient Quality Reporting (IQR) Program and Hospital Value-Based Purchasing (HVBP) Program, the National Quality Strategy (NQS), and other considerations discussed in sections II.B.7.b. and II.B.7.c. of the proposed rule.

Section 1886(n)(3)(B)(iii) of the Act requires that in selecting measures for eligible hospitals and CAHs, and in establishing the form and manner of reporting, the Secretary shall seek to avoid redundant or duplicative reporting with reporting otherwise required. In consideration of the importance of alignment with other measure sets that apply to eligible hospitals and CAHs, we analyzed the Hospital IQR Program, hospital CQMs used by state Medicaid agencies, and the Joint Commission's hospital CQMs when selecting the proposed CQMs to be reported under the EHR Incentive Program. Furthermore, as we noted in the proposed rule, we placed emphasis on those CQMs that are in line with the NQS and the HITPC's recommendations.

Comment: Many commenters supported alignment of measure sets and reporting methods with other quality reporting programs and agency goals, such as Hospital IQR Program, HVBP, and NQS. These commenters commended CMS's intentions to reduce duplicative requirements between programs, prevent hospitals from calculating both electronic and paper-based reports for the same CQMs, avoid confusion and move towards a single, aligned quality reporting mechanism. However, several commenters requested that we provide a timeline for these alignment efforts as well as additional clarification regarding how we intend to pursue and achieve alignment across quality report programs and what this means operationally for eligible hospitals and CAHs. One commenter requested that we also align with the Center for Disease Control and Prevention's (CDC's) National Healthcare Safety Network (NHSN) to make hospital acquired infections (HAI) a national healthcare priority. Other commenters requested that we seek alignment and accuracy in other areas of quality measurement, including electronic specifications, data reporting methodologies, and vendor certification requirements. One commenter also urged that we continuously align electronic specifications for all CQMs across quality reporting programs as measure stewards update and maintain their CQMs.

Response: We appreciate the supportive comments regarding alignment. Our principal goals in alignment of the Hospital IQR, and the Medicare and Medicaid EHR Incentive Programs are to: (1) Provide a single set of CQMs for hospital reporting; (2) to the extent possible, avoid duplicate reporting by hospitals by using a single submission for multiple purposes as appropriate; and (3) transition from manual chart abstraction to automated extraction and electronic reporting based on the use of EHR technology.

In the FY 2012 Inpatient Prospective Payment Systems/Long-Term Care Hospital Prospective Payment System (IPPS/LTCH PPS) proposed rule (76 FR 25893), we stated our intention to explore mechanisms for Hospital IQR Program data collection using EHRs, and gave FY 2015 as an example of when hospitals might be able to switch to EHR-based reporting of manually chart-abstracted Hospital IQR measures. The CQMs we are finalizing beginning in 2014 for reporting under the EHR Incentive Program are electronically specified versions of current IQR chart abstracted CQMs. The 2015 target date would allow for at least 1 year of electronic submission of CQMs through the EHR Incentive Program prior to our targeted date to begin EHR-based reporting for IQR. We must assess any data collection mode differences between EHR-based reporting and chart abstracted measures using a diverse and robust sample of hospitals before proposing in rulemaking to use EHR data collection in the Hospital IQR program. Among other factors, our ability to transition to EHR-based reporting for IQR will depend on whether EHR-based reporting is accurate and reliable. Our goal would be to phase out manual chart abstraction for hospital reporting.

We did not propose the IQR CQMs on HAI for the EHR Incentive Program. Hospitals may electronically submit HAI information to the CDC, although this is not required. Information of electronic submission through the NHSN can be found at *http://www.cdc.gov/nhsn/CDA_eSurveillance.html*. NHSN data is based on surveillance data rather than chart abstraction. We will consider the NHSN measures for the EHR Incentive Program in future years.

(b) CQMs for Eligible Hospitals and CAHs for FY 2013

For the EHR reporting periods in FY 2013, we proposed to require that eligible hospitals and CAHs submit information on each of the 15 CQMs that were finalized for FYs 2011 and 2012 in the Stage 1 final rule (75 FR 44418 through 44420). We refer readers to the discussion in the Stage 1 final rule for further explanation of the requirements for reporting those CQMs (75 FR 44411 through 44422).

We did not receive any public comments on our proposals, and we are finalizing the CQMs for FY 2013 as proposed.

(c) CQMs for Eligible Hospitals and CAHs Beginning With FY 2014

(i) Reporting Options

We proposed to require eligible hospitals and CAHs to report 24 CQMs from a menu of 49 CQMs beginning with FY 2014, including at least 1 CQM from each of the following 6 domains, which are discussed in section II.B.3. of this final rule:

- Patient and Family Engagement.
- Patient Safety.
- Care Coordination.
- Population and Public Health.
- Efficient Use of Healthcare Resources.
- Clinical Process/Effectiveness.

For the remaining CQMs, we proposed that eligible hospitals and CAHs would select and report CQMs that best apply to their patient mix. We solicited comments on the number of CQMs and the appropriateness of the CQMs and domains for eligible hospitals and CAHs.

Comment: A few commenters stated that the requirement to report 24 CQMs was too difficult and adds to the administrative burden placed on eligible hospitals and CAHs, especially rural hospitals. Many commenters suggested that CQM reporting requirement beginning with 2014 remain at 15 CQMs due to the number of issues experienced by hospitals when implementing the Stage 1 CQMs, although other commenters stated that requiring up to 18 CQMs would be reasonable. A few commenters noted that CQMs were not evenly distributed among the 6 domains, making the requirement to report at least one CQM from each domain difficult for some hospitals. One commenter recommended that if a domain did not have at least 4 CQMs eligible hospitals and CAHs should not be required to report that domain. Multiple commenters stated that eligible hospitals and CAHs in Stage 1 in FY 2014 may have difficulty meeting the CQM requirement beginning in 2014 and recommend that the Stage 1 CQMs meet the requirements for those hospitals. Alternatively, the commenters recommended that if the CQMs beginning in 2014 are required, that the number of CQMs being reported be reduced for the eligible hospitals and CAHs in Stage 1 beginning in FY 2014. One commenter stated that CQM requirements failed to align with other meaningful use objectives.

Response: We acknowledge that increasing the number of CQMs required to be reported from 15 in 2011, 2012, and 2013 to 24 beginning in 2014 increases implementation burden on hospitals. We have stated our intention to implement EHR-based reporting of CQMs in other quality reporting programs, such as the Hospital IQR Program. One purpose of our proposal to increase the number of CQMs reported electronically for the EHR Incentive Program is to create an electronic reporting infrastructure that we can also use for other quality reporting programs. We also acknowledge that the requirement of reporting 24 CQMs for hospitals in their first year of Stage 1 in 2014 is a significant increase from the reporting requirement for hospitals that entered Stage 1 before 2014. We also acknowledge the difficulty in meeting the requirement to report at least 1 CQM in each of the 6 domains. For these reasons, we have finalized a policy that decreases the number of CQMs required from the proposal and decreases the total number of domains required to be covered among the selected CQMs.

After consideration of the public comments received and for the reasons discussed previously, we are finalizing the following policy on reporting requirements for CQMs for eligible hospitals and CAHs beginning in 2014:

Eligible hospitals and CAHs must report a total of 16 CQMs covering at least 3 domains from Table 8. We expect eligible hospitals and CAHs will select measures that best apply to their patient mix. As we proposed, if an eligible hospital's or CAH's CEHRT does not contain patient data for at least 16 CQMs covering at least 3 domains, then the eligible hospital or CAH must report the CQMs for which there is patient data and report the remaining required CQMs as ''zero denominators'' as displayed by their certified EHR technology. In the unlikely event that there are no CQMs applicable to the eligible hospital's or CAH's patient mix, eligible hospitals or CAHs must still report 16 CQMs even if zero is the result in either the numerator or the denominator of the measure. If all CQMs have a value of zero from their CEHRT, then eligible hospitals or CAHs must select any 16 CQMs from Table 8 to report. We stated in the proposed rule that our experience from Stage 1 in implementing the current set of 15 CQMs in specialty and low volume eligible hospitals illuminated several challenges. For example, children's hospitals rarely see patients 18 years or older. One of the exceptions to this generality is individuals with sickle cell disease. National Institutes of Health Guidelines (NIH Publication 02–2117) list the conditions under which thrombolytic therapy cannot be recommended for adults or children with sickle cell disease. This, plus the

fact that children's hospitals have on average two or fewer cases of stroke per year, have created workflow, cost, and clinical barriers to demonstrating meaningful use as it relates to the CQMs for stroke and VTE.

We proposed to consider whether a case number threshold would be appropriate, given the apparent burden on hospitals that very seldom have the types of cases addressed by certain CQMs such that hospitals that do not have enough cases to exceed the threshold would be exempt from reporting those CQMs. We solicited comments on what the numerical range of threshold should be, how hospitals would demonstrate to CMS or state Medicaid agencies that they have not exceeded this threshold, whether it should apply to only certain hospital CQMs (and if so, which ones), and the extent of the burden on hospitals if a case number threshold is not adopted given that they are allowed to report ''zeroes'' for the measures. We solicited comments on limiting the case threshold exemption to only children's, cancer hospitals, and a subset of hospitals in the Indian Health System as they have a much narrower patient base than acute care and critical access hospitals. We requested comments on whether such thresholds should be established for 2013, noting that the issue could be mitigated beginning in 2014 by our proposal to establish a larger menu set of CQMs from which hospitals would select.

Comment: Many commenters noted that the implementation of a case number threshold for CQM reporting would help reduce the burden placed on hospitals that very seldom have cases in the denominator of certain CQMs. However, commenters suggested differing mechanisms by which to implement a case number threshold. Many commenters suggested that we use Medicare claims data from the year prior to a hospital's CQM submission or another historical data source to determine whether a hospital should be exempt from reporting certain CQMs. Another commenter suggested that the simplest option would be to continue to allow hospitals to report zeroes in the denominators for CQMs. A few commenters requested that we implement a case number threshold for all hospital types, not just specialty hospitals or CAHs, since some acute care hospitals do not provide a full range of services. Another commenter suggested that we work with children's hospitals and CAHs and other types of hospitals with unique patient populations to ensure that meaningful use requirements are feasible for them. Some commenters stated that low volume eligible hospitals and CAHs would not know at the beginning of a reporting period which CQMs would not meet a case number threshold and therefore should not have to select the CQMs in advance based on this criterion. This commenter suggested that the hospitals select the CQMs to report that are most appropriate for their patient populations. One commenter requested that a case number threshold be implemented for all CQM reporting for FY 2013.

In terms of a specific case number threshold, one commenter suggested five or fewer cases per month as an appropriate threshold number to exempt any type of hospital from reporting a CQM. This same commenter also suggested that if a hospital does not have a least one CQM in a domain with a denominator greater than five, then that hospital should be exempt from reporting on that entire domain. Another commenter suggested exempting eligible hospitals and CAHs from reporting a CQM if the relevant patient population comprised less than 10 percent of their discharges. Other commenters suggested that children's hospitals be excluded from all CQMs that are only applicable to patients 18 years of age or older. Another commenter recommended that we set a case number threshold of 30 cases and require hospitals to validate this exemption through attestation. Other commenters did not suggest a specific case number threshold, but requested that we empirically derive this value and that it be aligned with values across quality reporting programs.

Response: We recognize the potential cost and work flow challenges when hospitals have a low volume of cases per year that apply to a particular CQM. We note that under the Hospital IQR Program, we do not require a hospital that has 5 or fewer inpatient discharges (Medicare and non-Medicare combined) in a topic area during a quarter in which data must be submitted to submit patient-level data for that topic area for the quarter (76 FR 51641). For the Hospital IQR Program, the hospital is still required to submit its aggregate population and sample size counts for Medicare and non-Medicare discharges for the topic areas each quarter, and hospitals that qualify for this exception for a particular topic can still elect to voluntarily submit their patient-level data. In order to align with the Hospital IQR Program, we will adopt a similar policy for all eligible hospitals and CAHs participating in the EHR Incentive Program, whereby hospitals with 5 or fewer inpatient discharges per quarter or 20 or fewer inpatient discharges per year (Medicare and non-Medicare combined) as defined by a CQM's denominator population would be exempted from reporting on that CQM.

After consideration of the public comments received and for the reasons discussed earlier, we are finalizing the following policy on case threshold exemptions for eligible hospitals and CAHs in all stages of meaningful use beginning in FY 2014. However, eligible hospitals and CAHs that are demonstrating meaningful use for the first time must submit their CQMs through attestation and will not be able to qualify for this exemption. The burden of submitting the aggregate population and sample size counts in order to qualify for the exemption would be at least equal to the effort required to obtain and attest to the calculated CQM data.

Eligible hospitals and CAHs that have 5 or fewer discharges per quarter in the same quarter as their reporting period in FY 2014, or 20 or fewer discharges per full FY reporting period beginning in FY 2015, for which data is being electronically submitted (Medicare and non-Medicare combined) as defined by the CQM's denominator population are exempted from reporting the CQM. For example, if the CQM's denominator population is ischemic stroke patients greater than or equal to 18 years of age, then the threshold would be 5 or fewer ischemic stroke patients aged 18 years or older discharged from the hospital in the quarter for which data is being submitted (the hospital's FY 2014 3-month quarter reporting period). To be eligible for the exemption, hospitals must submit their aggregate population and sample size counts for Medicare and non-Medicare discharges for the CQM for the reporting period no later than the 2-month submission period of October 1 through November 30 immediately following the reporting period (please see section II.B.1. of this final rule for a description of reporting and submission periods). Hospitals will report this information in the same manner as for the Hospital IQR Program (76 FR 51639 through 51641). Please refer to the QualityNet Web site (*www.qualitynet.org*) and the CMS/Joint Commission Specifications Manual for National Hospital Inpatient Quality Measures, located on the QualityNet Web site, for technical information about data submission requirements. Hospitals that do not seek an exemption under the EHR Incentive Program do not have to submit aggregate population and sample size counts for any CQMs for the purposes of the EHR Incentive Program.

(ii) Clinical Quality Measures

We proposed CQMs in Table 9 of the Stage 2 proposed rule (77 FR 13760 to 13763) that would apply for all eligible hospitals and CAHs beginning with FY 2014, regardless of whether an eligible hospital or CAH is in Stage 1 or Stage 2 of meaningful use. The set of 49 CQMs that we proposed included the current set of 15 CQMs that were finalized for FYs 2011 and 2012 in the Stage 1 final rule.

The CQM titles and descriptions in Table 8 reflect the most current updates, as provided by the measure stewards who are responsible for maintaining and updating the measure specifications, and therefore may not reflect the title and/or description as presented on the NQF Web site.

Comment: Many commenters requested that we finalize fewer than 49 CQMs. The most common reasons given for reducing the complete list of CQMs included limitations of the vendors to program and deploy systems and for hospitals to effectively implement those systems, especially among resource-limited organizations.

Several commenters recommended that CQMs that are suspended from the Hospital IQR program, not NQF endorsed, only apply to certain regions of the country or not electronically specified should not be considered for CQM reporting beginning in 2014. Additionally, some commenters suggested that no new CQMs be added until CEHRT can produce accurate calculations of the existing CQMs. A few commenters stated that increasing the number of CQMs in such a narrow timeframe would be challenging for organizations in terms of designing, creating, and implementing new workflows, building, testing and modifying configurations to ensure proper discrete data capture, and training staff. One of these commenters requested a phased-in approach for calculating CQMs through EHRs and requested that we do not add any new manually abstracted CQMs in other CMS quality reporting programs.

One commenter stated that it was unclear if mid-cycle modifications of measures would require hospitals to resubmit data and recommended that if a measure were modified or deleted mid-cycle that hospitals not have to modify measures selected.

Response: Some of the CQMs that were proposed but not finalized were not submitted by the measure stewards for continued NQF endorsement (NQF 0136 Heart Failure (HF)-1 Detailed Discharge Instructions, NQF 0481 First Temperature Measured within One Hour of Admission to the NICU, and NQF 0482 First NICU Temperature <36 degrees C). We are not finalizing NQF 0143 and NQF 0144, both related to pediatric asthma, for CQM reporting beginning in 2014 because hospital performance on these measures in the IQR program is at or near 100 percent. While pediatric asthma is a priority for CMS, we recognize that there are greater opportunities to improve care than in measuring the provision of relievers and systemic corticosteroids, which are now common practice. Our future quality measurement and improvement efforts will focus on other aspects of the clinical care for children with asthma, targeting for inclusion in CQM reporting with Stage 3 rulemaking. We have also taken into consideration the ability of the eligible hospitals and CAHs to report CQMs from CEHRT when selecting the set of CQMs for reporting beginning in 2014.

CQM specifications will be updated on an annual basis. We will not require resubmission of data as a result of these updates. If we remove a CQM from the program, we would not require data to be submitted on any additional CQMs nor would this affect data submitted prior to removal of the CQM. See section II.B.4. of this final rule for additional details on this policy.

Comment: Some commenters requested denominator definitions such as elective delivery vs. delivery based on a physician's order, and clarification on age ranges. A few commenters requested that some of the measure stewards listed in Table 9 of the proposed rule be corrected.

Response: Clarifications on denominator definitions will be provided in the electronic specifications that will be posted on or about the publication of the final rule. Any further clarification needed should be addressed to the measure steward. The measure stewards listed incorrectly in Table 9 of the proposed rule were corrected (the correction notice can be found at 77 FR 23195 through 23196).

Comment/Response: Table 9 summarizes the public comments received on specific proposed eligible hospital and CAH CQMs and the CMS rationale (that is, our response to the CQM-specific comment(s)) for finalizing or not finalizing the CQM for reporting beginning with FY 2014.

TABLE 9—SUMMARY OF ELIGIBLE HOSPITAL AND CAH CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	CMS rationale
ED Throughput: NQF 0495, 0497, 0496.	Many supported continuing with Stage 1 CQMs, instead of requiring additional CQMs for Stage 2 (ED-1&2). ED throughput measures are required by the Joint Commission.	Few stated factors affecting results are outside control of ED, difficult to implement without workflow changes and CPOE implemented hospital-wide, & may reflect negatively on hospitals routinely receiving complex patients. One commenter noted may not correlate with improved outcomes.	Yes	Continues with Stage 1 CQM reporting for ED-1&2, aligns with IQR/OQR/HVBP, retooled measures passed reliability, validity, & feasibility testing.
Stroke-2,3,4,5,6,8: NQF 0435, 0436, 0437, 0438, 0439, 0440.	Many supported continuing with Stage 1 CQMs, instead of requiring additional CQMs for Stage 2.	Few stated that it is difficult to capture certain data elements within current clinical workflows, and recommends delay to Stage 3 after further e-specification testing is completed.	Yes	Continues with Stage 1 CQM reporting, aligns with IQR/HVBP, retooled measures passed reliability, validity, & feasibility testing.

TABLE 9—SUMMARY OF ELIGIBLE HOSPITAL AND CAH CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	CMS rationale
Stroke-10: NQF 0441	Many supported continuing with Stage 1 CQMs, instead of requiring additional CQMs for Stage 2.	A commenter stated that this is a poor care coordination measure but provided no reasons.	Yes	Continues with Stage 1 CQM reporting, aligns with IQR/HVBP, retooled measures passed reliability, validity, & feasibility testing.
VTE-1,2,3,4,5,6: NQF 371, 0372, 0373, 0374, 0375, 0376.	Many supported continuing with Stage 1 CQMs, instead of requiring additional CQMs for Stage 2.	Few stated that it is difficult to capture certain data elements within current clinical workflows, one recommended delay to Stage 3 after further e-specification testing is completed.	Yes	Continues with Stage 1 CQM reporting, aligns with IQR/HVBP, retooled measures passed reliability, validity, & feasibility testing.
AMI-1, 3, 5: NQF 0132, 0137, 0160.	One commenter supported AMI-3, but for Stage 3 once CPOE is more widely implemented & e-specifications can be published in a timely manner to allow for inclusion of new guidelines. Inclusion will help tracking compliance.	Many stated these measures should not be finalized since they have been suspended from IQR, are not recommended by the MAP, are difficult to implement without CPOE implemented hospital-wide & one commenter stated it is difficult to capture unless an eMAR is implemented. AMI-1 & 5 are not included in CMS programs.	No	Suspended from IQR, thus not supportive of program alignment.
AMI-2, 7a: NQF 0142, 0164	A few commenters support including these measures for Stage 3 to allow for additional time for testing & implementation. AMI-2 is required by the Joint Commission. Inclusion will help tracking compliance.	One commenter requested delay to Stage 3 until CPOE is more widely implemented. One commenter noted AMI-2 is topped out.	Yes	Aligns with IQR/HVBP, which both consider it an important CQM on post-discharge AMI prevention for hospitals to report. Retooled measure passed reliability, validity, & feasibility testing.
AMI-8a,10: NQF 0163, 0639	N/A	One commenter stated it is difficult to capture certain data elements within current clinical workflows; one commenter stated it is difficult to capture if CPOE is not widely implemented.	Yes	Aligns with IQR/HVBP, retooled measure passed reliability, validity, & feasibility testing.
PN-3b: NQF 0148	One commenter supports including this measure for Stage 3 to allow additional time for testing & implementation. A few commenters support this measure if e-specifications are available in a timely manner. This is required by the Joint Commission.	Delay to Stage 3 after further e-specification testing is completed.	No	Retired from NQF endorsement.
PN-6: NQF 0147	N/A	One commenter states data collection is difficult due to absent decision support algorithm.	Yes	Aligns with IQR/HVBP, retooled measure passed reliability, validity, & feasibility testing.
Elective Delivery Prior to 39 Weeks: NQF 0469.	A commenter supports the inclusion of this safety-related CQM.	Not required in IQR, a commenter was concerned that labor and delivery applications are not part of certification.	Yes	Aligns with IQR, Medicaid Adult Core, & Strong Start programs, retooled measure passed reliability, validity, & feasibility testing.
Exclusive Breast Feeding at Discharge: NQF 0480.	Many commenters support this, noting that it will help improve maternity care practices and create an awareness of quality of care issues. A commenter supported this measure, but for Stage 3 once labor and delivery applications are part of certification.	Not required in IQR, highly subjective measure, specific to California only and not well vetted, and contains data elements difficult to capture.	Yes	Aligns with Medicaid reporting initiatives. Measure passed reliability, validity, & feasibility testing.

TABLE 9—SUMMARY OF ELIGIBLE HOSPITAL AND CAH CQM-SPECIFIC COMMENTS AND RATIONALE TO FINALIZE OR NOT FINALIZE THE CQM—Continued

CQM No.	Commenters support finalization	Commenters do not support finalization	Finalized	CMS rationale
Home Management Plan of Care, CAC-3: NQF 0338.	A commenter supports this measure, but not until documentation for peri-operative, intra-operative and anesthesia are parts of certification.	Not required in IQR, not supported by the MAP, and overly burdensome.	Yes	Aligns with Medicaid reporting initiatives. Measure passed reliability, validity, & feasibility testing.
Healthy Term Newborn: NQF 0716.	A commenter supports this measure. A commenter supports this measure, but for Stage 3 once labor and delivery applications are part of certification.	Not required in IQR	Yes	Aligns with Medicaid reporting initiatives. Measure passed reliability, validity, & feasibility testing.
Hearing Screening: NQF 1354	One commenter supports this measure if e-specifications are available in a timely manner.	Not required in IQR	Yes	Aligns with Medicaid reporting initiatives. Measure passed reliability, validity, & feasibility testing.
SCIP INF-1,2,9: NQF 0527, 0528, 0453.	A commenter supports these measures, but not until documentation for peri-operative, intra-operative and anesthesia are parts of certification. Inclusion will help tracking compliance.	N/A	Yes	Aligns with IQR/HVBP, retooled measure passed reliability, validity, & feasibility testing.
SCIP INF-3,4,6: NQF 0529, 0300, 0301.	A commenter supports this measure, but not until documentation for peri-operative, intra-operative and anesthesia are parts of certification. SCIP-INF-3 is required by the Joint Commission..	Not required in IQR and not recommended by the MAP. One commenter noted SCIP INF-6 may not correlate with improved outcomes.	No	SCIP-INF-3 reflects a limited patient population, keeps the total number of Stage 2 measure options reasonable. SCIP-INF-4 is being reworked by the steward. SCIP-INF-6 is suspended from reporting in IQR.
HF-1: NQF 0136	One commenter supported	One commenter did not support since being retired from NQF endorsement.	No	Retired from NQF endorsement.
First Temperature within 1 hour in NICU > 36° and <36°: NQF 0481, 0482.	One commenter supported if e-specifications are published in a timely manner.	A few commenters stated it is not required in IQR and not recommended by MAP.	No	Retired from NQF endorsement.
Global Immunizations Pneumonia & Influenza; NQF 1653, 1659.	N/A	A few commenters stated these are not consistent with current guidelines.	No	Required in IQR but not for HVBP, and keeps the total number of Stage 2 measure options reasonable.
Proportion of Infants 22-29 weeks old treated with Surfactant: NQF 0484.	N/A	Contains data elements difficult to capture.	No	Retired from NQF endorsement.

All hospital CQMs finalized in this rule are NQF-endorsed. NQF endorsement includes a consensus development process that takes into account clinical guidelines and scientific evidence. NQF describes its consensus development process at *http://www.qualityforum.org/Measuring_Performance/Consensus_Development_Process.aspx*.

After consideration of the public comments received and the measure selection criteria discussed, we are finalizing the list of 29 CQMs for eligible hospitals and CAHs included in Table 10.

TABLE 10—CQMS FINALIZED FOR ELIGIBLE HOSPITALS AND CAHS BEGINNING WITH FY 2014

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0495	Title: Emergency Department (ED)-1 Emergency Department Throughput—Median time from ED arrival to ED departure for admitted ED patients. Description: Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department.	CMS/Oklahoma Foundation for Medical Quality (OFMQ) Qualitynet.org and click on ''Questions & Answers''.	IQR		Patient and Family Engagement.

TABLE 10—CQMS FINALIZED FOR ELIGIBLE HOSPITALS AND CAHS BEGINNING WITH FY 2014—Continued

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0497	Title: ED-2 Emergency Department Throughput—admitted patients—Admit decision time to ED departure time for admitted patients. Description: Median time (in minutes) from admit decision time to time of departure from the emergency department for emergency department patients admitted to inpatient status.	CMS/OFMQ Qualitynet.org and click on ''Questions & Answers''.	IQR	.....	Patient and Family Engagement.
0435	Title: Stroke-2 Ischemic stroke—Discharged on anti-thrombotic therapy. Description: Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Clinical Process/Effectiveness.
0436	Title: Stroke-3 Ischemic stroke—Anticoagulation Therapy for Atrial Fibrillation/Flutter. Description: Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Clinical Process/Effectiveness.
0437	Title: Stroke-4 Ischemic stroke—Thrombolytic Therapy. Description: Acute ischemic stroke patients who arrive at this hospital within 2 hours (120 minutes) of time last known well and for whom IV t-PA was initiated at this hospital within 3 hours (180 minutes) of time last known well.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Clinical Process/Effectiveness.
0438	Title: Stroke-5 Ischemic stroke—Antithrombotic therapy by end of hospital day two. Description: Ischemic stroke patients administered antithrombotic therapy by the end of hospital day two.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Clinical Process/Effectiveness.
0439	Title: Stroke-6 Ischemic stroke—Discharged on Statin Medication. Description: Ischemic stroke patients with LDL greater than or equal to 100 mg/dL, or LDL not measured, or, who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Clinical Process/Effectiveness.
0440	Title: Stroke-8 Ischemic or hemorrhagic stroke—Stroke education. Description: Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Patient & Family Engagement.
0441	Title: Stroke-10 Ischemic or hemorrhagic stroke—Assessed for Rehabilitation. Description: Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Care Coordination.
0371	Title: Venous Thromboembolism (VTE)-1 VTE prophylaxis. Description: This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Patient Safety.

TABLE 10—CQMS FINALIZED FOR ELIGIBLE HOSPITALS AND CAHS BEGINNING WITH FY 2014—Continued

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0372	Title: VTE-2 Intensive Care Unit (ICU) VTE prophylaxis. Description: This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer).	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	.....	Patient Safety.
0373	Title: VTE-3 VTE Patients with Anticoagulation OverlapTherapy. Description: This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications or have a reason for discontinuation of overlap therapy. Overlap therapy must be administered for at least five days with an international normalized ratio (INR) greater than or equal to 2 prior to discontinuation of the parenteral anticoagulation therapy, discharged on both medications or have a reason for discontinuation of overlap therapy.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	New	Clinical Process/Effectiveness.
0374	Title: VTE-4 VTE Patients Receiving Unfractionated Heparin (UFH) with Dosages/Platelet Count Monitoring by Protocol (or Nomogram). Description: This measure assesses the number of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	New	Clinical Process/Effectiveness.
0375	Title: VTE-5 VTE discharge instructions ..... Description: This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement, or home on hospice care on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	New	Patient and Family Engagement.
0376	Title: VTE-6 Incidence of potentially preventable VTE. Description: This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present at admission) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date.	The Joint Commission *www.jointcommission.org* and click on ''Contact Us''.	IQR	New	Patient Safety.
0142	Title: AMI-2-Aspirin Prescribed at Discharge for AMI. Description: Acute myocardial infarction (AMI) patients who are prescribed aspirin at hospital discharge.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR	New	Clinical Process/Effectiveness.
0469	Title: PC-01 Elective Delivery Prior to 39 Completed Weeks Gestation. Description: Patients with elective vaginal deliveries or elective cesarean sections at >= 37 and <39 weeks of gestation completed.	The Joint Commission (TJC) *www.jointcommission.org* and click on ''Contact Us''.	TJC	.....	Clinical Process/Effectiveness.

TABLE 10—CQMS FINALIZED FOR ELIGIBLE HOSPITALS AND CAHS BEGINNING WITH FY 2014—Continued

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0164	Title: AMI-7a—Fibrinolytic Therapy Received Within 30 minutes of Hospital Arrival. Description: Acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving fibrinolytic therapy during the hospital stay and having a time from hospital arrival to fibrinolysis of 30 minutes or less.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, HVBP	New	Clinical Process/Effectiveness.
0163	Title: AMI-8a—Primary PCI Received Within 90 Minutes of Hospital Arrival. Description: Acute myocardial infarction (AMI) patients with ST-segment elevation or LBBB on the ECG closest to arrival time receiving primary PCI during the hospital stay with a time from hospital arrival to PCI of 90 minutes or less.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, HVBP	New	Clinical Process/Effectiveness.
0639	Title: AMI-10 Statin Prescribed at Discharge ..... Description: Acute Myocardial Infarction (AMI) patients who are prescribed a statin at hospital discharge.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR	New	Clinical Process/Effectiveness.
0147	Title: PN-6—Initial Antibiotic Selection for Community-Acquired Pneumonia (CAP) in Immunocompetent Patients. Description: Immunocompetent patients with Community-Acquired Pneumonia who receive an initial antibiotic regimen during the first 24 hours that is consistent with current guidelines.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, HVBP	New	Efficient Use of Healthcare Resources.
0527	Title: SCIP-INF-1 Prophylactic Antibiotic Received within 1 Hour Prior to Surgical Incision. Description: Surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision. Patients who received Vancomycin or a Fluoroquinolone for prophylactic antibiotics should have the antibiotics initiated within 2 hours prior to surgical incision. Due to the longer infusion time required for Vancomycin or a Fluoroquinolone, it is acceptable to start these antibiotics within 2 hours prior to incision time.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, HVBP	New	Patient Safety.
0528	Title: SCIP-INF-2-Prophylactic Antibiotic Selection for Surgical Patients. Description: Surgical patients who received prophylactic antibiotics consistent with current guidelines (specific to each type of surgical procedure).	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, HVBP	New	Efficient Use of Healthcare Resources.
0453	Title: SCIP-INF-9—Urinary catheter removed on Postoperative Day 1 (POD1) or Postoperative Day 2 (POD2) with day of surgery being day zero. Description: Surgical patients with urinary catheter removed on Postoperative Day 1 or Postoperative Day 2 with day of surgery being day zero.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	IQR, TJC	New	Patient Safety.
0496	Title: ED-3—Median time from ED arrival to ED departure for discharged ED patients. Description: Median time from emergency department arrival to time of departure from the emergency room for patients discharged from the emergency department.	CMS/OFMQ *www.qualitynet.org* and click on ''Questions & Answers''.	OQR	New	Care Coordination.
0338	Title: Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver. Description: An assessment that there is documentation in the medical record that a Home Management Plan of Care (HMPC) document was given to the pediatric asthma patient/caregiver.	The Joint Commission (TJC) *www.jointcommission.org* and click on ''Contact Us''.	state use	New	Patient & Family Engagement.

TABLE 10—CQMS FINALIZED FOR ELIGIBLE HOSPITALS AND CAHS BEGINNING WITH FY 2014—Continued

NQF No.	Title	Measure steward and contact information	Other quality measure programs that use the same CQM ***	New CQM	Domain
0480	Title: Exclusive Breast Milk Feeding ..... Description: Exclusive breast milk feeding during the newborn's entire hospitalization.	The Joint Commission (TJC) *www.jointcommission.org* and click on ''Contact Us''.	state use	New	Clinical Process/Effectiveness.
0716	Title: Healthy Term Newborn ..... Description: Percent of term singleton live births (excluding those with diagnoses originating in the fetal period) who DO NOT have significant complications during birth or the nursery care.	California Maternal Quality Care Collaborative *www.cmqcc.org* and click on ''Contact Us''.	state use	New	Patient Safety.
1354	Title: EHDI-1a—Hearing screening prior to hospital discharge. Description: This measure assesses the proportion of births that have been screened for hearing loss before hospital discharge.	CDC *www.cdc.gov* and click on ''Contact CDC''.	state use	New	Clinical Process/Effectiveness.

*** IQR = Inpatient Quality Reporting.
TJC = The Joint Commission.
HVBP = Hospital Value-Based Purchasing.
OQR = Outpatient Quality Reporting.

8. Reporting Methods for Eligible Hospitals and Critical Access Hospitals

(a) Reporting Methods in FY 2013

In the Stage 2 proposed rule, we did not propose any reporting methods for Medicare eligible hospitals and CAHs in 2013. However, in the CY 2013 OPPS proposed rule (77 FR 45188), we stated that eligible hospitals and CAHs may continue to report by attestation CQM results as calculated by CEHRT, as they did for 2011 and 2012. For further explanation of reporting CQMs by attestation, please see the Stage 1 final rule (75 FR 44430 through 44434). We also proposed in the CY 2013 OPPS proposed rule (77 FR 45188) to continue for 2013 the voluntary electronic reporting pilot for CQMs (the Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs), which we had previously established for 2012. We expect to finalize in the CY 2013 Hospital OPPS final rule the reporting methods that would apply in 2013 for eligible hospitals and CAHs participating in the Medicare EHR Incentive Program.

(b) Reporting Methods Beginning With FY 2014

Under section 1886(n)(3)(A)(iii) of the Act, eligible hospitals and CAHs must submit information on the CQMs selected by the Secretary ''in a form and manner specified by the Secretary'' as part of demonstrating meaningful use of CEHRT. We proposed that Medicare eligible hospitals and CAHs would select one of the following two options for submitting CQMs electronically.

- Option 1: Submit the selected 24 CQMs through a CMS-designated portal.

We proposed that CQM data would be submitted in an XML-based format on an aggregate basis reflective of all patients without regard to payer. This method would require eligible hospitals and CAHs to log into a CMS-designated portal and submit through an upload process data that is based on specified structures produced as output from their CEHRT.

- Option 2: Submit the selected 24 CQMs in a manner similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs using CEHRT.

We proposed that, as an alternative to the aggregate-level reporting schema described previously under Option 1, Medicare eligible hospitals and CAHs that successfully report CQMs through an electronic reporting method similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs using CEHRT would satisfy their CQMs reporting requirement under the Medicare EHR Incentive Program. Please refer to the CY 2012 OPPS final rule (76 FR 74489 through 74492) for details on the pilot.

We noted that the Hospital IQR program does not currently have an electronic reporting mechanism. We solicited comments on whether an electronic reporting option is appropriate for the Hospital IQR Program and whether it would provide further alignment with the EHR Incentive Program.

Comment: One commenter preferred Option 1 because it seems less burdensome. This commenter believed that a third party data warehouse to store patient-level data and aggregate the results would be necessary prior to implementing Option 1. The commenter also believed that the hospital should be able to calculate its own results.

Response: Hospitals have access to patient-level data. A hospital could use a CEHRT that can calculate CQM results and also directly report patient-level data to CMS, so these functions are not mutually exclusive. No data warehouse is necessary.

Comment: One commenter supported both the aggregate XML-based reporting option and the option similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot as well as the longer-term goal of attaining full automatic electronic reporting. Another commenter urged us to make the strategy for automating the reporting of CQM data clear, so that hospitals can avoid reporting the same quality data through multiple reporting mechanisms. One commenter urged us to make the necessary investment to establish the infrastructure for the flow of EHR data, with careful consideration given to how we will ensure reliable, valid, and complete CQM data.

Response: We are working to align the EHR Incentive Program with various other quality reporting programs in order to reduce duplicative reporting to the extent feasible and practical, beginning with the Hospital IQR Program. Under the Hospital IQR Program, hospitals report some

measures by submitting chart-abstracted patient-level data, reflective of all patients without regard to payer. More information on the Hospital IQR Program, including the chart-abstracted measure data submission process, can be found in the ''Guide to CMS Hospital IQR Program'' on the QualityNet Web site (*http://www.qualitynet.org/*, select ''Hospital Inpatient Quality Reporting Program'' from the ''Hospitals—Inpatient'' dropdown menu and click on the link to the guide from the ''Handbooks'' menu on the right side of the page). We expect to establish a similar mechanism for electronic submission of CQM data for the EHR Incentive Program.

The Hospital IQR Program does not currently have an EHR reporting option or requirement, but eligible hospitals and CAHs have been able to meet the CQM requirement for the EHR Incentive Program via the electronic reporting pilot. However, we expect that the Hospital IQR Program will transition to EHR-based reporting in a manner similar to the electronic reporting pilot, using an electronic transmission format such as the QRDA–I (for patient-level data). If the Hospital IQR Program establishes an EHR reporting option or requirement, we would consider whether we should allow hospitals to report CQMs through that mechanism using CEHRT for purposes of satisfying the CQM reporting component of the EHR Incentive Program.

We proposed to consider an ''interim submission'' option for Medicare eligible hospitals and CAHs that are in their first year of Stage 1 beginning in FY 2014 through an electronic reporting method similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs. Under this option, eligible hospitals and CAHs would electronically submit CQM data for a continuous 90-day EHR reporting period, and the data would have to be received no later than July 1 to meet the requirements of the EHR Incentive Program for purposes of avoiding a payment adjustment in the following year. We solicited public comment on this potential option.

Comment: One commenter supported an ''interim submission'' option for those in their first year, which the commenter stated could also serve as a transitional step for those catching up.

Response: Since we are allowing eligible hospitals and CAHs to submit their CQM data through attestation if they are in their first year of Stage 1, we are not finalizing the proposed interim submission option.

After consideration of the public comments received, we are finalizing the following policy for CQM reporting methods for eligible hospitals and CAHs beginning in FY 2014.

Eligible hospitals and CAHs that are in their first year of Stage 1 must report the selected 16 CQMs through attestation (please refer to the Stage 1 final rule for an explanation of reporting CQMs through attestation (75 FR 44430 through 44434)). For purposes of avoiding a payment adjustment, eligible hospitals that are in their first year of demonstrating meaningful use in the year immediately preceding a payment adjustment year must submit their CQM data no later than July 1 of such preceding year. We note that this deadline does not apply to CAHs. For more details on submission deadlines specific to CAHs, please refer to section II.D.4. of this final rule.

Eligible hospitals and CAHs that are beyond their first year of meaningful use will be required to electronically submit the selected 16 CQMs using CEHRT using one of the options listed in this section of this final rule. Consistent with section 1886(n)(3)(B)(ii) of the Act, in the unlikely event that the Secretary does not have the capacity to receive CQM data electronically, eligible hospitals and CAHs may continue to report aggregate CQM results through attestation.

- Option 1: Submit the selected 16 CQMs on an aggregate basis through a CMS-designated transmission method using CEHRT.

The CQM data will be submitted in the QRDA–III format reflective of all patients without regard to payer. This method will require transmitting the data via a CMS-designated transmission method.

- Option 2: Submit the selected 16 CQMs on a patient-level basis in a manner similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs using CEHRT. As long as the CQM data originates from CEHRT, it may be submitted directly from the hospital's CEHRT to CMS or through a data intermediary to CMS.

The electronically reported patient-level CQM data must use the QRDA category I (release 2) based on the Quality Data Model (QDM), which will include only patients that meet the denominator criteria of each reported CQM without regard to payer. For example, if a hospital selects NQF #0438 to report, the denominator criteria include ischemic stroke patients, so the QRDA–I for this CQM would include only ischemic stroke patients. This method will require submitting the data via a transmission method similar to the 2012 Medicare EHR Incentive Program Electronic Reporting Pilot for Eligible Hospitals and CAHs (76 FR 74122). The requirement that eligible hospitals and CAHs submit patient-level data under the EHR Incentive Program is consistent with the requirement that hospitals submit patient-level data under other quality reporting programs such as the Hospital IQR Program.

We proposed to consider the following 4 options of patient population—payer data submission characteristics:

- All patients—Medicare only.
- All patients—all payer.
- Sampling—Medicare only, or
- Sampling—all payer.

Currently, the Hospital IQR program uses the ''sampling—all payer'' data submission characteristic. We solicited public comment on each of these 4 sets of characteristics and the impact they may have to vendors and hospitals, including but not limited to potential issues with the respective size of data files for each characteristic. We proposed to select 1 of the 4 sets as the data submission characteristic for the electronic reporting method for eligible hospitals and CAHs beginning in FY 2014.

Comment: Many commenters favored the all patient-all payer submission option. Nearly all of these commenters supported this option because of challenges identifying whether a patient is covered by Medicare or not. One commenter also noted that sampling Medicare patients alone would severely decrease the population of patients reported in the denominator for many CQMs, and that it is difficult to validate that the sampling is being done correctly. The commenter also argued that since data is captured at the time of care, there should be no difficulty submitting the data and therefore no need for sampling. Another commenter advised against permitting sampling for CQM reporting beginning in 2014 as it adds an additional level of complexity. One commenter stated that the ideal solution would be having both—all patient-all payer, and all patient-Medicare only, which would allow for Medicare vs. non-Medicare comparisons.

Some commenters who favored the all patient-all payer data submission option suggested that sampling-all payer be made available as an alternative option, with one noting that a no-sampling method may be burdensome for hospital staff who must manually enter clinical data that is not captured electronically.

If sampling is adopted, the commenter asks that it align with existing Hospital IQR Program sampling methodologies. One commenter preferred the sampling-all payer submission option, noting that it aligns with the reporting method for the Hospital IQR Program.

Response: We acknowledge hospitals' concerns about accurately distinguishing Medicare patients from other patients in their populations, and recognize that reporting data on Medicare patients only would reduce the population of patients for whom data are reported in most cases. Since payer will be collected as a supplemental data element for all CQMs beginning in 2014, we will be able to stratify measure results by payer. In the 2014 Edition certification criteria, ONC has increased the focus on CEHRT's capability to capture the structured data elements required for reporting the CQMs finalized in this rule. Therefore, the burden on hospital staff to manually enter data from a source other than the CEHRT should be greatly reduced. We also expect to propose electronic sampling algorithms in future rulemaking.

After consideration of the public comments received, we are finalizing the ''sampling-all payer'' option for patient-level data. This submission characteristic will only include patients that meet the denominator criteria of the CQMs that the eligible hospital or CAH selects to report to CMS and only the data elements listed in the CQM and transmission specifications for those patients would be sent to CMS.

(c) Electronic Reporting of Clinical Quality Measures for Medicaid Eligible Hospitals

States that have launched their Medicaid EHR Incentive Programs plan to collect CQMs electronically from CEHRT used by eligible hospitals. Each state is responsible for sharing the details on the process for electronic reporting with its provider community. We anticipate that whatever means states have deployed for capturing CQMs included in the Stage 1 final rule electronically will be similar for CQMs beginning in 2014. However, we note that subject to our prior approval, the process, requirements, and the timeline is within the states' purview.

Comment: Commenters suggested unified Medicaid CQM reporting to reduce the burden on eligible hospitals operating in multiple states.

Response: For the purposes of the Medicaid EHR Incentive Program, eligible hospitals only have to report CQMs to the state making the EHR incentive payment. However, data from all practice locations that are equipped with CEHRT will be used for reporting CQMs, even if the practice locations are in different states.

After consideration of the public comments received, we are finalizing the policies for electronic reporting of CQMs for Medicaid eligible hospitals as proposed. We are clarifying that dually-eligible hospitals may submit their CQMs via the methods outlined in section II.B.8.b. of this final rule. As part of certification for EHR technology, ONC is including testing for data capture, CQM calculation, and electronic submission. For CQMs, this includes certification criteria for the QRDA–I and QRDA–III transmission format. We expect the states that have electronic reporting options for CQMs might choose to adopt QRDA–I for patient-level data and/or QRDA–III for aggregate data as the form in which eligible hospitals would report CQM data. By adopting the same QRDA–I and/or QRDA–III formats that CMS is requiring for CQM reporting, the states would be able to leverage the development of the specifications by CMS and the industry as well as the testing done by ONC for certification of EHR technology. This would reduce the burden on EHR vendors to implement and test different specifications.

C. Demonstration of Meaningful Use and Other Issues

1. Demonstration of Meaningful Use

a. Common Methods of Demonstration in Medicare and Medicaid

We proposed to continue our common method for demonstrating meaningful use in both the Medicare and Medicaid EHR Incentive Programs. The demonstration methods we adopt for Medicare will automatically be available to the states for use in their Medicaid programs. The Medicare methods are segmented into CQMs and meaningful use objectives, both of which meaningful users must meet. (We note that the discussion in this part of the preamble discuss the methods for meaningful use objectives. For the discussion on CQM reporting, please refer to II.B. of this final rule). We did not receive any comments on this general policy and for this final rule will continue the policy that was proposed (that is, common methods of demonstration with some flexibility for states as described in II.A.3.c of this final rule).

b. Methods for Demonstration of the Stage 2 Criteria of Meaningful Use

Except for the batch reporting option discussed in section II.C.1.c. of this final rule, we proposed no other changes to the attestation process for Stage 2 meaningful use objectives. We proposed several changes to reporting for CQMs beginning 2014, regardless of Stage, as discussed in section II.B. of this final rule. An EP, eligible hospital or CAH must successfully attest to the Stage 2 meaningful use objectives and successfully submit clinical quality measures to be a meaningful EHR user. We have revised § 495.8 to accommodate the Stage 2 objectives and measures, as well as changes to Stage 1.

As discussed in our proposed rule (77 FR 13764), as HIT matures we expect to base demonstration more on automated reporting by CEHRT, such as the direct electronic reporting of measures, both clinical and nonclinical, and documented participation in HIE. As this occurs, fewer objectives will be demonstrated through attestation. As explained in the proposed rule, however, we do not believe that the current advances in HIT and the certification of EHR technologies allow an alternative to attestation for the Stage 2 final rule. We will continue to evaluate possible alternatives to attestation and the accompanying changes to certification and meaningful use.

In addition, in lieu of EP-by-EP attestation, we proposed a batch file process for attestation. This batch file process would continue to require that meaningful use measures be assessed at the individual EP, eligible hospital or CAH level. It would be available no later than January 1, 2014. Batch reporting would allow large group practices to submit a large number of attestations at once, while still maintaining individual assessments of meaningful use. We proposed that a batch file process as discussed later would occur through the CMS attestation Web site. Each EP would still meet the required meaningful use thresholds independently; our proposal did not allow the use of group averages or any other method of group demonstration.

We explained that CMS and the states could continue to test options, such as registries or the direct electronic reporting of some measures; however, any such testing would be voluntary.

c. Group Reporting Option of Meaningful Use Core and Menu Objectives and Associated Measures for Medicare and Medicaid EPs Beginning With CY 2014

As explained previously, we proposed a batch reporting process that would allow groups of EPs to report each individual EP's core and menu objective data through a batch process, but would

maintain individual assessments of meaningful use. (We note that the discussion in this part of the preamble does not discuss CQM reporting, which is discussed in II.B. of this final rule).

Specifically, we proposed to establish a file format in which groups could submit core and menu objective information for individual Medicare EPs (including the stage of meaningful use the individual EP is in, numerator, denominator, exclusion, and yes/no information for each core and menu objective) as well as a process for uploading such batch files.

We proposed that states would have the option, but not be required to, offer batch reporting of meaningful use data for Medicaid EP, and that states would outline their approaches in their state Medicaid HIT Plans (under current regulatory requirements in § 495.332(c)(2) and (c)(3)).

We proposed the following policies would apply to batch reporting:

- Define a Medicare EHR Incentive Group as 2 or more EPs, each identified with a unique NPI associated with a group practice identified under one tax identification number (TIN) through the Provider Enrollment, Chain, and Ownership System (PECOS).
- States choosing to exercise this option will have to clearly define a Medicaid EHR Incentive Group via their state Medicaid HIT Plan.
- None of the EPs in either a Medicare or Medicaid EHR Incentive Group could be hospital-based according to the definition for these programs (see 42 CFR 495.4).
- Any EP that successfully attests as part of one Medicare EHR Incentive Group will not be permitted to also attest individually or attest as part of a batch report for another Medicare EHR Incentive Group.
- Because EPs can only participate in either the Medicare or Medicaid incentive programs in the same payment year, an EP that is part of a Medicare EHR Incentive Group will not be able to receive a Medicaid EHR incentive payment or be included as part of a batch report for a Medicaid EHR Incentive Group or vice versa.
- The group reporting option discussed in this section is limited to data for the core and menu objectives and does not include the reporting of clinical quality measures, which is also required to demonstrate meaningful use and receive an EHR incentive payment. Clinical quality measures must be reported separately through other electronic submission options. (These options are described in section II.B. of this final rule.).
- Because we proposed multiple group reporting methods for clinical quality measures, EPs will *not* have to report core and menu objective data in the same EHR Incentive Group as they report clinical quality measures. An EP will be able to submit the core and menu objectives as part of a group and the clinical quality measures as an individual or submit the core and menu objectives as an individual and the clinical quality measures as part of a group.
- Batch reporting would not be required by CMS and t EPs will be permitted to attest individually through the CMS attestation Web site (as long as they did not also report as part of a group).
- As in Stage 1, EPs will be required to individually meet all of the thresholds of the core and menu objectives and could not use group averages or any other method of group demonstration.
- Batch reporting would not change the policy that payment adjustments will be applied to individual EPs and not to Medicare EHR Incentive Groups. This policy is described in section II.D. of this final rule.
- Batch reporting would not change incentive payment assignment. That is, as with Stage 1, an EP's incentive payment will not be automatically assigned to the Medicare EHR Incentive Group with which they batch report under this option. The EP will still have to select the payee TIN during the registration process.
- An EP who chooses the group reporting option will be required to include in such reporting core and menu objective information on all outpatient encounters (that is, all encounters except those in the inpatient and emergency departments) where CEHRT is available, even if some encounters occurred at locations not associated with the EP's Medicare EHR Incentive Group. We explained that this policy is required because EPs who practice in multiple practices or locations are responsible for submitting complete information for all actions taken at practices/locations equipped with CEHRT. Under § 495.4, to be considered a meaningful EHR user, an EP must have 50 percent or more of their outpatient encounters in practice(s) or location(s) where CEHRT is available. In the July 28, 2010 final rule (75 FR 44329), we also made clear that an EP must include outpatient encounters for all locations equipped with CEHRT.
- There would not be a minimum participation threshold for reporting as part of an EHR Incentive Group; in other words, an EP who is able to meet the 50 percent threshold of patient encounters in locations equipped with CEHRT could report all of their core and menu objective data as part of an EHR Incentive Group in which they had only 5 percent of their patient encounters with that group, provided they report all of the data from the other locations through the same batch reporting process with the EHR Incentive Group.

Many commenters supported our proposal to institute a batch reporting process.

Some commenters offered comments or requested clarification. The summary of the comments and our responses follow:

Comment: A few commenters questioned the statement that a group for purposes of batch reporting is two or more EPs, each identified with a unique NPI associated with a group practice identified under one tax identification number (TIN) through the Provider Enrollment, Chain, and Ownership System (PECOS). These commenters suggested that the difference between this definition of a group and the one under the Physician Quality Reporting System (PQRS) is confusing and should be harmonized or aligned.

Response: Generally we agree with the principle of aligning definitions when possible. However, this rulemaking does not address PQRS definitions. Alignment with the current PQRS definition would entail changing our policy from 2 or more EPs to 25 or more EPs. We do not believe the benefits of alignment are greater than the administrative relief to group practices made up of 2 to 24 EPs. However, we note that in the Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule, DME Face-to-Face Encounters, Elimination of the Requirement for Termination of Non-Random Prepayment Complex Medical Review and Other Revisions to Part B for CY 2013 proposed rule (77 FR 44722) we proposed to revise the PQRS definitions to 2 or more EPs. If finalized, the PQRS definition would align with our policy. Therefore, we are finalizing our policy that would allow batch reporting for groups with 2 (or more) EPs that meet the rules for such reporting. After consideration of the comments, we will establish a file format in which groups could submit core and menu objective information for individual Medicare EPs (including the stage of meaningful use the individual EP is in, numerator, denominator, exclusion, and yes/no information for each core and menu objective) and also establish a process through which groups would submit this batch file for

upload as proposed. As noted previously, this batch file reporting process does not apply to CQM reporting, which is discussed in section II.B of this final rule.

After consideration of the public comments received, we are finalizing this option as proposed. There is no accompanying regulation text for this policy, as it governs the procedures for attestation, but not the meaningful use requirements.

We also sought public comment on a group reporting option that measures performance at a group, rather than at an individual, level (referred to as the ''group performance'' option.) Rather than proposing a set of rules for such group performance, we requested comment on a host of topics. Many commenters supported a group performance option; however, we received very few detailed comments on many of the specific issues we put forth for discussion. Therefore, we continue to believe that additional policy development is necessary to address specifically how group performance would operate. We are not finalizing the group performance policy at this time, as we wish to consider it further. EPs will continue to be required to individually meet all of the thresholds of the core and menu objectives. The following comments were received on issues relating to group performance.

We requested comments on the definition of ''group,'' noting that the PQRS Group Reporting Option requires a physician group practice to have a single tax payer identification number (TIN), with 25 or more individual eligible professionals who have reassigned their billing rights to the TIN. Commenters responded that 25 is too large a number, with some suggesting 4 to 6, or even 2 or more, as an appropriate range. Commenters recommended that each EP within the TIN, be given the choice of participation in the group or individually. Some commenters also questioned whether a consistent TIN indicates a coherent group practice with care coordination.

We requested comments on whether there should be a self-nomination process for groups, as in PQRS, or an alternative process for identifying groups. Commenters generally supported self-nomination, if it is a simple process.

We also asked whether groups should be required to use the same CEHRT. Some commenters believed such a requirement would be onerous, explaining that in some cases imaging providers, such as radiologists have their own CEHRT. Other commenters supported using the same CEHRT to ensure consistent reporting.

We questioned whether a group could be eligible for group reporting if CEHRT (same or different) were not available to all associated EPs at all locations. Some commenters responded yes, that in large systems clinics may be added or upgraded at different points in time and there may be transition times during which some clinics may not have CEHRT. Commenters stated that a threshold could be used to ensure that the EHR is available for most of the services provided by the group. Others stated that, no, groups should be held to the same standard; if the group as a whole is not eligible, individuals could still demonstrate meaningful use on an individual basis.

We requested comment on the appropriate policy when a group uses multiple certified EHR technologies that cannot share data easily. Some commenters stated that because the group as a whole should still have to meet the meaningful use objectives, interoperability should not be a barrier to group performance. These commenters stated that while interoperability is the ultimate goal of EHR technology, it should not become a requirement prematurely and providers and vendors are best positioned to remedy interoperability problems. Commenters also urged us to ensure that clearinghouses and software vendors are within the scope of the covered entities that must comply with the rule, although no authority was cited for requiring such compliance.

We questioned how meaningful use activities should be calculated, particularly when an EP practices individually and with a group, or in multiple group practices. Some commenters stated that meaningful use would always be at the group level. Others stated that if there are EPs practicing across two or more groups, then neither group should use the group reporting option, as this could result in different menu measure selections and other complications. Other commenters recommended that the EP's covered services be calculated as a whole to generate the incentive payment amount and separate payments be made to each TIN based on the percentage of the EP's covered services that were assigned to each TIN.

We noted that the HITECH Act provides EPs who are meaningful users an incentive payment equal to 75 percent of Medicare allowable charges for covered professional services furnished by the EP in a payment year. Thus, we questioned how covered professional services performed by EPs in some other practice could be assigned to another group's TIN. Commenters suggested that groups could submit lists of EPs covered under its group submission and that have reassigned payment to the TIN. The covered services should include all covered services for the EP, regardless of TIN under which the services were billed. Commenters asserted that this process is not different from the current method in which individual EPs that work for multiple TINs can still reassign their incentive payments to a single TIN. Others recommended that for purposes of determining the 75 percent, CMS should simply limit its analysis to those services furnished at that practice.

We solicited public comment on how meaningful use activities performed at other groups should be included. Some commenters stated that groups should attest only for the services within the group practice, not services outside of the group. These commenters expressed concern about not being able to validate outside data.

If meaningful use activities outside the group were not included in group performance, we asked what the CMS policy should be for these activities performed outside the group. Commenters recommended that only the group activities should be considered, and that those activities performed outside the group should essentially be ignored.

We solicited input on what our policy should be if an EP reports as part of a group, but he or she actually fails to meet a measure individually. Commenters generally stated that individual performance should be subsumed in the group performance. They assert that groups will have their own internal incentives to ensure that EPs are properly using the EHR system.

Along the same lines, we requested information on what should happen if an EP rejects a particular objective completely. Should such an EP be considered a meaningful EHR user as long as the EP's non-participation still allows group compliance with a percentage threshold? Again, commenters recommended measurement solely at the group level. Again, they stated that the group practice would have its own incentives to ensure EPs within the group properly use CEHRT.

We questioned how yes/no objectives should be handled in group reporting. Commenters again recommended measurement at the group level: A yes would mean that the group has ''enabled'' and is using that functionality of its CEHRT.

We questioned how group performance would operate in cases when some EPs in the group participate in Medicaid while others participate in Medicare. Commenters stated that groups could provide lists of EPs and indicate which EPs are covered under Medicare versus Medicaid. However, in any case we, could also encourage states to accept the group's submission as applying to Medicaid, as well as Medicare. While another commenter suggested that Medicare should be the default choice for a group, unless they all participate in Medicaid.

As to our question of whether any incentive payment would be reassigned to the group automatically, or whether the EP would assign it to the group at registration, commenters gave conflicting recommendations. Some stated that individual EPs could reassign incentive payments to a TIN, and that the group could, at the end of the period, present a list of EPs who are within the TIN and reassigned payment to such TIN. Others favored automatic reassignment to the group demonstrating group performance, particularly when an EP is employed or contracts with only one group, or when a state does not permit assignment to an entity promoting the adoption of EHR technology. A commenter requested clarification on how an EP joining midyear would be handled.

We requested comments on the policies that would apply if an EP participates in one group's performance and the incentive payment were reassigned to the group automatically, but the EP also has covered services billed to other TINs. Commenters stated that if an EP leaves a group, there should be a mechanism for reporting this and allowing the EP to report individually or become part of another group; regardless, the automatic reassignment should stand.

We solicited information on how to address situations when an EP leaves a group during an active EHR reporting period. Commenters recommended that incentives could be pro-rated on this basis, perhaps with ''beginning and ending dates'' included in the group performance file to streamline the proration.

We requested information regarding payment adjustments, and whether they should also be applied at the group level. Some stated that group performance should be consistent at the incentive and payment adjustment phases of the EHR Incentive Program. Thus, if groups can receive incentives based on group performance, then group performance should also dictate payment adjustments at a group level. Others favored maintaining payment adjustments at the individual EP level.

Finally, we solicited alternative options for reporting meaningful use, while capturing necessary data. One commenter recommended a ''sub-TIN'' group reporting option where a specific department, specialty or clinic could report performance on a group basis.

2. Data Collection for Online Posting, Program Coordination, and Accurate Payments

In addition to the data already being collected under our regulations at § 495.10, we proposed to collect the business email address of EPs, eligible hospitals and CAHs to facilitate communication with providers. We proposed to begin collecting the information as soon as the registration system can be updated following the publication of this final rule for both the Medicare and Medicaid EHR Incentive Programs. We did not propose to post this information online. In our preamble, we proposed to amend § 495.10 accordingly. However, no regulation text appeared. We did not receive any comments on our proposal. We are finalizing regulation text at § 495.10(a)(3) to collect business email address.

We note that we did not propose any changes to the registration for the Medicare and Medicaid EHR Incentive Programs, to the rules on EPs switching between programs, or to the record retention requirements in § 495.10.

We did not propose any changes to the registration for the Medicare and Medicaid EHR Incentive Programs, to the rules on EPs switching between programs, or to the record retention requirements in § 495.10.

We did not receive any comments and we are finalizing these provisions as proposed.

3. Hospital-Based Eligible Professionals

Our only proposed changes to the definition of hospital-based eligible professional were to allow the determination of hospital-based to continue once the payment adjustments go into effect, and to propose that the hospital-based analysis at the payment adjustment phase would, for Medicare, be based on federal FY 2 years prior to the payment adjustment year. (See proposed § 495.4 and section II.D.2. of this final rule.)

We also requested comments on whether the definition of hospital-based should be refined to exclude from the definition those EPs who are not furnishing professional services ''through the use of the facilities and equipment, including qualified electronic health records, of the hospital'' (section 1903(t)(3)(D) and 1848(o)(1)(C)(ii) of the Act). We noted that during implementation of Stage 1, we were asked about situations where clinicians may work in specialized hospital units, the clinicians have independently procured and utilize EHR technology that is completely distinct from that of the hospital, and the clinicians are capable, without the facilities and equipment of the hospital, of meeting the eligible professional (for example ambulatory, not inpatient) definition of meaningful use. We stated our belief that such situations would be uncommon and might not be generalized under the uniform definition used by place of service codes.

We specifically requested comments on the following subjects: (1) How to determine whether specialized hospital units are using stand-alone certified EHR technology separate from that of the hospital; and (2) how to determine whether EPs using stand-alone certified EHR technology separate from that of the hospital are truly not accessing the facilities and equipment of the hospital. We proposed that hospital facilities and equipment would include the physical environment needed to support the necessary hardware; internet connections and firewalls; the hardware itself, including servers; and system interfaces necessary for demonstrating meaningful use, for example, to health information exchanges, laboratory information systems, or pharmacies. We proposed possibly using attestation for such elements, and noted our belief that any such attestations would be subject to audit and the False Claims Act.

We also requested comments on whether the criteria for ambulatory EHRs and the meaningful use criteria that apply to EPs could be met in cases where EPs are primarily providing inpatient or Emergency Department services. By definition, the EPs affected by this issue are those who provide 90 percent or more of their services in the inpatient or emergency department, and who provide less than 10 percent of their services, and possibly none, in outpatient settings. However, since the beginning of the program, we have been clear that for EPs, meaningful use measures will not include patient encounters that occur within the inpatient or emergency departments (POS 21 or 23). See for example, FAQ 10068, 10466, and FAQ 10462 at *http://questions.cms.gov* or in section II.A.3.d.(2). of this final rule.

Some of our meaningful use criteria for EPs are measured based on office visits (clinical summaries) and others

assume an outpatient type of setting (patient reminders). The certification rules at 45 CFR part 170 differentiate between ambulatory and inpatient EHRs, and we requested comments on whether the EPs in this case would have inpatient or ambulatory technology.

Comment: We received detailed comments addressing the majority of the questions we asked about how EPs would demonstrate they are not hospital-based were we to revise our definition of hospital-based to exclude EPs using stand-alone CEHRT separate from that of the hospital. These comments explained in a comprehensive manner how EPs use stand-alone CEHRT separate from that of the hospital, and also provide the facilities and equipment that make the use of CEHRT possible, including internet connections and firewalls. Commenters supported using the ambulatory certification criteria and the EP meaningful use objectives and measures with the inclusion of inpatient and emergency department encounters in meeting such measures.

Response: Given such comprehensive comments, we believe that it is possible for EPs to provide CEHRT in the hospital environment, that is, sufficiently independent of the facilities and equipment, including qualified electronic health records, of the hospital. In the Stage 1 final rule, we explained why we were not interpreting the statute to provide for individualized determinations of whether EPs were hospital-based. We focused on language in the statute stating that ''The determination of whether an eligible professional is a hospital-based eligible professional shall be made on the basis of the site of service.'' (See 75 FR 44440 through 44441). We continue to believe that this interpretation was reasonable based on the Congressional directive regarding site of service. However, we are now persuaded that the statute is also capable of the interpretation advanced by the commenters. Thus, while we continue to believe our prior interpretation was proper, we are convinced that other permissible interpretations may also be put forward through rulemaking. Therefore, we have added a new § 495.5 to allow us to exclude EPs who can demonstrate to us that the EP funds the acquisition, implementation, and maintenance of Certified EHR Technology, including supporting hardware and any interfaces necessary to meet meaningful use without reimbursement from an eligible hospital or CAH; and uses such Certified EHR Technology in the inpatient or emergency department of a hospital (instead of the hospital's CEHRT).

Once an EP registers for a given year they will know whether they are hospital based or not. An EP who is designated as hospital based, but wishes to be determined non hospital-based due to their funding of the acquisition, implementation and maintenance of CEHRT, including supporting hardware; and use of such CEHRT at a hospital, in lieu of using the CEHRT of such hospital will utilize an administrative process throughout the incentive payment year (and extending 2 months after the end of the incentive payment year) to provide documentation and seek a non-hospital based determination. Following a successful non-hospital based determination, the EP must attest each subsequent year that they continue to be in the same situation of funding of the acquisition, implementation and maintenance of CEHRT, including supporting hardware; and use of such CEHRT at a hospital without reimbursement from an eligible hospital or CAH, in lieu of using the Certified EHR Technology of such hospital, but would not have to provide the supporting documentation again. If and when a nonhospital-based determination has been made, the EP would then have to meet the same requirements of the EHR incentive program as any other EP including being subject to payment adjustments if applicable with a sole exception: The EP would include in their attestation to meaningful use all encounters at all locations, including those in the inpatient and emergency departments of the hospital, rather than just outpatient locations (other than the emergency department) as is the case for all other EPs.

4. Interaction With Other Programs

There were no proposed changes to the ability of providers to participate in the Medicare and Medicaid EHR Incentive Programs and other CMS programs, and we are not finalizing any new policies in this area. We continue to work on aligning the data collection and reporting of the various CMS programs, especially in the area of clinical quality measurement. See section II.B. of this final rule for the proposed alignment initiatives for clinical quality measures.

Comment: Several commenters suggested changes to other CMS programs.

Response: Our proposed rule included policies for the EHR incentive program, and not other programs. Therefore, we are not addressing comments on rules other than the EHR incentive program, as these programs are outside the scope of this rulemaking.

D. Medicare Fee-for-Service

1. General Background and Statutory Basis

As we discussed in the Stage 1 final rule, sections 4101(b) and 4102(b) of the HITECH Act provide for reductions in payments to EPs, hospitals, and CAHs that are not meaningful users of CEHRT; beginning in CY 2015 for EPs, FY 2015 for hospitals, and in cost reporting periods beginning in FY 2015 for CAHs. We discuss the specific statutory requirements for each of these payment reductions in the following three sections. In these sections, we also present our specific policies for implementing these mandatory payment reductions.

2. Payment Adjustment Effective in CY 2015 and Subsequent Years for EPs Who Are Not Meaningful Users of CEHRT for an Applicable Reporting Period

Section 1848(a)(7) of the Act, as amended by section 4101(b) of the HITECH Act, provides for payment adjustments effective for CY 2015 and subsequent years for EPs, as defined in § 495.100 of the regulations, who are not meaningful EHR users during the relevant EHR reporting period for the year. In general, beginning in 2015, if an EP is not a meaningful EHR user for the EHR reporting period for the year, then the Medicare physician fee schedule (PFS) amount for covered professional services furnished by the EP during the year (including the fee schedule amount for purposes of determining a payment based on the fee schedule amount) is adjusted to equal the ''applicable percent'' (defined later) of the fee schedule amount that will otherwise apply. As we also discuss later, the HITECH Act includes an exception, which, if applicable, could exempt certain EPs from this payment adjustment. The payment adjustments do not apply to hospital-based EPs.

The term ''applicable percent'' is defined in the statute to mean: ''(I) for 2015, 99 percent (or, in the case of an eligible professional who was subject to the application of the payment adjustment [if the EP is not a successful electronic prescriber] under section 1848(a)(5) of the Act for 2014, 98 percent); (II) for 2016, 98 percent; and (III) for 2017 and each subsequent year, 97 percent.''

In addition, section 1848(a)(7)(iii) of the Act provides that if, for CY 2018 and subsequent years, the Secretary finds that the proportion of EPs who are meaningful EHR users is less than 75

percent, the applicable percent shall be decreased by 1 percentage point for EPs who are not meaningful EHR users from the applicable percent in the preceding year, but that in no case shall the applicable percent be less than 95 percent.

Section 1848(a)(7)(B) of the Act provides that the Secretary may, on a case-by-case basis, exempt an EP who is not a meaningful EHR user for the reporting period for the year from the application of the payment adjustment if the Secretary determines that compliance with the requirements for being a meaningful EHR user would result in a significant hardship, such as in the case of an EP who practices in a rural area without sufficient Internet access. The exception is subject to annual renewal, but in no case may an EP be granted an exception for more than 5 years.

a. Applicable Payment Adjustments in CY 2015 and Subsequent Calendar Years for EPs Who Are Not Meaningful Users of CEHRT

Consistent with these provisions, in the Stage 1 final rule (75 FR 44572), we provided in § 495.102(d)(1) and (2) that, beginning in CY 2015, if an EP is not a meaningful EHR user for an EHR reporting period for the year, then the Medicare PFS amount that will otherwise apply for covered professional services furnished by the EP during the year will be adjusted by the following percentages: for 2015, 99 percent (or, in the case of an EP who was subject to the application of the payment adjustment for e-prescribing under section 1848(a)(5) of the Act for 2014, 98 percent); (2) for 2016, 98 percent; and (3) for 2017 and each subsequent year, 97 percent.

However, while we discussed the application of the additional adjustment for CY 2018 and subsequent years if the Secretary finds that the proportion of EPs who are meaningful EHR users is less than 75 percent in the preamble to the final rule (75 FR 44447), we did not include a specific provision for this adjustment in the regulations text. Therefore, we proposed to revise the current regulations, to provide specifically that, beginning with CY 2018 and subsequent years, if the Secretary has found that the proportion of EPs who are meaningful EHR users under § 495.8 is less than 75 percent, the applicable percent is decreased by 1 percentage point for EPs who are not meaningful EHR users from the applicable percent in the preceding year, but that in no case is the applicable percent less than 95 percent. In the proposed rule, we stated our expectation that we would base the determination of the proportion of EPs each year on the most recent CY for which we have sufficient data (that is, most likely, the data available as of October 1, 2017, as this is the last date for EPs to register and attest to meaningful use to avoid a payment adjustment in CY 2018). We proposed that the computation will be based on the ratio of EPs who have qualified as meaningful users in the numerator, to Medicare-enrolled EPs in the denominator. In the proposed rule we also explained that because hospital-based EPs and EPs are granted an exception meet the definition of ''EP,'' we would not include such EPs in the denominator, because such EPs would not be subject to a determination of meaningful use status ''under subsection (o)(2).'' We also stated that we would provide more specific detail on this computation in future guidance after the final regulation is published.

In general terms, the two aforementioned provisions for payment adjustments to EPs who are not meaningful users of EHR technology have the following effects for CY 2015 and subsequent years. The adjustment to the Medicare PFS amount that will otherwise apply for covered professional services furnished by the EP will be 99 percent in CY 2015. However, for CY 2015 the adjustment for an EP who, in CY 2014, was subject to the application of the payment adjustment for e-prescribing under section 1848(a)(5) of the Act will be 98 percent of the Medicare PFS amount. In CY 2016, the adjustment to the Medicare PFS amount that will otherwise apply will be 98 percent. Similarly, the adjustment to the Medicare PFS amount that will otherwise apply will be 97 percent in CY 2017. Depending on whether the proportion of EPs who are meaningful EHR users is less than 75 percent, the adjustment to the Medicare PFS amount can be as low as 96 percent in CY 2018, and 95 percent in CY 2019 and subsequent years.

We did not receive any comments on our proposed methodology for making the determination of the applicable payment adjustment for Medicare EPs, including our proposed methodology for making the ''75 percent determination'' beginning for CY2018. Therefore, we are finalizing these provisions as proposed.

We noted in our proposed rule that some eligible professionals may be eligible for both the Medicare and Medicaid EHR incentives, and have opted for the Medicaid EHR incentive. Under that program, in the first year of their participation, EPs may be eligible for an incentive payment for having adopted, implemented, or upgraded (AIU) to CEHRT. However, AIU does not constitute meaningful use of CEHRT. Therefore, those EPs who receive an incentive payment for AIU will not be considered meaningful EHR users for purposes of determining whether EPs are subject to the Medicare payment adjustment. Medicaid EPs who meet the first year requirements through AIU in either 2013 or 2014 will still be subject to the Medicare payment adjustment in 2015 if they are not meaningful EHR users for the applicable reporting period. However, Medicaid EPs can, avoid this consequence by making sure that they meet meaningful use in 2013 (or 2014 if this is the first year of demonstrating meaningful use). Since the Medicaid EHR Incentive Program allows EPs to initiate as late as 2016, AIU can still be an important initial step for providers who missed the window to avoid the Medicare penalties, assuming they then demonstrate meaningful use in the subsequent year.

Comment: Commenters stated universal support for our proposal that EPs who are meaningful EHR users under the Medicaid EHR Incentive Program for an applicable reporting period will also be considered meaningful EHR users for that period for purposes of avoiding the Medicare payment adjustments.

Response: We agree with commenters and are finalizing this provision as proposed for the reasons outlined in the proposed rule.

Comment: A few commenters suggested that we allow Medicaid AIU to be used to avoid the payment adjustment.

Response: The statute (section 1848(a)(7) of the Act) specifically requires that the Medicare payment adjustment be applied to an EP ''who is not a meaningful EHR user * * * for an EHR reporting period for the payment year.'' As we have discussed previously, AIU does not involve the demonstration of meaningful use. Therefore, we cannot accept the commenters' recommendation that demonstration of AIU be accepted to allow an EP to avoid the Medicare payment adjustment.

After consideration of the public comments received, we are finalizing these provisions as proposed.

TABLE 11—PERCENT ADJUSTMENT FOR CY 2015 AND SUBSEQUENT YEARS, ASSUMING THAT, FOR CY 2018 AND SUBSEQUENT YEARS, THE SECRETARY FINDS THAT LESS THAN 75 PERCENT OF EPS ARE MEANINGFUL EHR USERS

EPs who are non-meaningful users	2015	2016	2017	2018	2019	2020+
EP is not subject to the payment adjustment for e-prescribing in 2014	99%	98%	97%	96%	95%	95%
EP is subject to the payment adjustment for e-prescribing in 2014	98	98	97	96	95	95

TABLE 12—PERCENT ADJUSTMENT FOR CY 2015 AND SUBSEQUENT YEARS, ASSUMING THAT THE SECRETARY ALWAYS FINDS THAT, FOR CY 2018 AND SUBSEQUENT YEARS, AT LEAST 75 PERCENT OF EPS ARE MEANINGFUL EHR USERS

EPs who are non-meaningful users	2015	2016	2017	2018	2019	2020+
EP is not subject to the payment adjustment for e-prescribing in 2014	99%	98%	97%	97%	97%	97%
EP is subject to the payment adjustment for e-prescribing in 2014	98	98	97	97	97	97

Comment: A commenter noted use of the word, ''during,'' in section 1848(a)(7) of the Act, which states: ''* * * if the eligible professional is not a meaningful EHR user (as determined under subsection (o)(2) for an EHR reporting period for the year, the fee schedule amount for such services furnished by such professional during the year (including the fee schedule amount for purposes of determining a payment based on such amount) shall be equal to the applicable percent of the fee schedule amount that would otherwise apply to such services under this subsection (determined after application of paragraph (3) but without regard to this paragraph).'' The commenter asserted that the phrase ''during the year'' allows the Secretary to apply the payment adjustment for any amount of time during the year and does not require that the payment adjustment be applied for the entire year.

Response: We disagree with this interpretation. Other parts of the statute clearly show the payment adjustment applies for a year at a time, and the Congress' intent was to have the physician fee schedule adjusted for an entire calendar year (that is, 99 percent (or 98 percent) in 2015, 98 percent in 2016, 97 percent in 2017, and so on.) The interpretation presented by the commenters would lead to absurd results, because it would allow the payment adjustment to be minimized to the point where it has no impact on the EP.

Therefore, we are finalizing the payment adjustment percentages and time periods as proposed.

b. EHR Reporting Period for Determining Whether an EP Is Subject to the Payment Adjustment for CY 2015 and Subsequent Calendar Years

In the Stage 1 final rule, we did not specifically discuss the EHR reporting periods that will apply for purposes of determining whether an EP is subject to the payment adjustments for CY 2015 and subsequent years. Section 1848(a)(7)(E)(ii) of the Act provides broad authority for the Secretary to choose the EHR reporting period for this purpose. Specifically, this section provides that ''term 'EHR reporting period' means, with respect to a year, a period (or periods) specified by the Secretary.'' Thus, the statute neither requires that such reporting period fall within the year of the payment adjustment, nor precludes the reporting period from falling within the year of the payment adjustment.

In developing our proposals in the case of EPs, we sought to establish appropriate reporting periods for purposes of the payment adjustments in CY 2015 and subsequent years to avoid creating a situation in which it might be necessary either to recoup overpayments or make additional payments after a determination is made about whether the payment adjustment should apply. We noted that this consideration is especially important in the case of EPs because, unlike the case with eligible hospitals and CAHs, there is not an existing mechanism for reconciliation or settlement of final payments subsequent to a payment year, based on the final data for the payment year. (Although, as we discussed in relation to our proposals on the payment adjustments for eligible hospitals in CY 2015 and subsequent years, this consideration also carries significant weight even where such a reconciliation or settlement mechanism is available.) Similarly, we did not want to create any scenarios under which providers would be required either to refund money, or to seek additional payment from beneficiaries, due to the need to recalculate beneficiary coinsurance after a determination of whether the payment adjustment should apply. If we were to establish EHR reporting periods that run concurrently with the payment adjustment year, we would not be able to safeguard against such retroactive adjustments (potentially including adjustments to beneficiary copayments, which are determined as a percentage of the Medicare PFS amount).

Therefore, we proposed that EHR reporting periods for payment adjustments will begin and end prior to the year of the payment adjustment. Furthermore, we proposed that the EHR reporting periods for purposes of such determinations will be far enough in advance of the payment adjustment year to give us sufficient time to implement the system edits necessary to apply any required adjustments correctly, and that EPs will know in advance of the payment adjustment year whether or not they are subject to the adjustments that we have discussed. Specifically, we proposed that the following rules would apply for establishing the appropriate reporting periods for purposes of determining whether EPs are subject to the payment adjustments in CY 2015 and subsequent years:

- Except as provided in the following bulleted paragraph for EPs who become meaningful users for the first time in 2014, we proposed that the EHR reporting period for the 2015 payment adjustment would be the same EHR reporting period that applies in order to receive the incentive for payment year

2013. We stated that this proposal would align reporting periods for multiple physician reporting programs. For EPs we proposed that the period would generally be a full calendar year of 2013 (unless 2013 is the first year of demonstrating meaningful use, in which case a 90-day EHR reporting period would apply). Under our proposed policy, an EP who receives an incentive for payment year 2013 would be exempt from the payment adjustment in 2015. An EP who received an incentive for payment years in 2011 or 2012 (or both), but who failed to demonstrate meaningful use in 2013 would be subject to a payment adjustment in 2015. (As all of these years will be for Stage 1 of meaningful use, we stated our belief that it is unnecessary to create a special process to accommodate providers that miss the 2013 year for meaningful use). For each year subsequent to CY 2015, we proposed an EHR reporting period for the payment adjustment that is the calendar year 2 years prior to the payment adjustment period, subject again to the special exception for new meaningful users of the CEHRT as follows:

• We proposed an exception for those EPs who never successfully attested to meaningful use prior to CY 2014. For these EPs, as it would be their first year of demonstrating meaningful use, for the 2015 payment adjustment, we proposed to allow a continuous 90-day reporting period that begins in 2014 and that ends at least 3 months before the end of CY 2014. In addition, the EP would have to successfully register for and attest to meaningful use no later than the date that occurs 3 months before the end of CY 2014. For EPs, we stated that under our proposal, the latest day the EP must successfully register for the incentive program and attest to meaningful use, and thereby avoid application of the adjustment in CY 2015, would be October 1, 2014. Thus, the EP's EHR reporting period would need to begin no later than July 3, 2014 (allowing the EP a 90-day EHR reporting period, followed by 1 extra day to successfully submit the attestation and any other information necessary to earn an incentive payment). We proposed that this policy would continue to apply in subsequent years for EPs who are in their first year of demonstrating meaningful use in the year immediately preceding the payment adjustment year.

Comment: Many commenters disagreed with our interpretation of the statute. These commenters asserted that both the Congressional intent and the language of the statute required an EHR reporting period aligned with the payment adjustment year. Thus, these commenters maintained that an EP should be subject to a payment adjustment during a payment year only if he or she fails to demonstrate meaningful use during that payment year. These commenters proposed several alternative methods for employing an EHR reporting period that is concurrent to the payment adjustment year for EPs. These recommended methods involved either making a determination of meaningful use early in a payment year, and then applying the payment adjustment (where applicable) for only a later part of the year, or developing a reconciliation process at the end of the year in which the payment adjustment is either collected from or refunded to the EP as appropriate.

Response: We disagree with the commenters' interpretation of the statutory language. As the commenters note, section 1848(a)(7) of the SSA specifically requires that the Medicare payment adjustment be applied to an EP ''who is not a meaningful EHR user * * * for an EHR reporting period for the payment year.'' However, as we discussed in the proposed rule, section 1848(a)(7)(E)(ii) of the Act specifically provides that ''term 'EHR reporting period' means, with respect to a year, a period (or periods) specified by the Secretary.'' Thus, the statute neither requires that such reporting period fall within the year of the payment adjustment, nor precludes the reporting period from falling within the year of the payment adjustment. Rather, the statute allows the Secretary the discretion to set the EHR reporting period and link to a year of payment adjustments. Indeed, given that Congress directed that the payment reduction that is applied to the physician fee schedule also apply for purposes of determining coinsurance, we believe there was an underlying intent to ensure that the physician fee schedule amount (and whether a percentage reduction applies) would be known at the time coinsurance is calculated. This would explain why Congress provided flexibility to the Secretary in determining which reporting period dictates whether the EP is subject to a payment adjustment. Finally, we note that other payment adjustment programs, such as the e-prescribing program, and the physician quality reporting system, also use a prior reporting period. Thus, it is consistent for us to adopt a prior reporting period for the EHR program as well.

Comment: Commenters also raised two more practical objections to our proposal to use a prior EHR reporting period. One objection is that there is insufficient vendor capacity for all providers to purchase CEHRT and achieve meaningful use prior to 2015, in order to avoid the payment adjustment in 2015. Some of these commenters asserted that the practical deadline for beginning the process of adopting and implementing CEHRT has already passed for some popular vendors; thus, vendor choice is limited by the proposed timeline. Commenters also assert that this issue is compounded because EHR vendors must upgrade current clients to 2014 CEHRT at roughly the same time.

Response: We understand the commenters' concerns. However, EPs have known for several years that they would face a payment adjustment beginning in 2015, and we believe that they have thus had adequate time to make appropriate preparations. During the last 2 years there has been a significant adoption of CEHRT with over 100,000 EPs receiving an incentive for adoption/implementation/upgrade or meaningful use. We also acknowledge the concerns expressed by many commenters about vendor capacity, and especially about whether every vendor will be available to every EP seeking to establish meaningful use. We note that to avoid the payment adjustment in 2015, all providers will be required to establish only Stage 1 of meaningful use in the applicable reporting period. For the payment adjustment in 2016, only those who first demonstrated meaningful use in 2011 or 2012 will have to demonstrate Stage 2 in the applicable reporting period and we are finalizing a shorter EHR reporting period for these EPs to account for the time limitations. We also believe other factors outweigh the concerns noted by commenters. As discussed previously, we do not believe the statute should be read to allow payment adjustments for only part of the year. Each of the other alternative suggestions presented by commenters would require reprocessing of claims for EPs, as well as addressing the difficult issue of how to adjust co-insurance in the context of this reprocessing (that is, to refund some coinsurance or to collect additional coinsurance, depending upon the results of the reprocessing on each claim). The administrative and financial cost of the reprocessing that would be required would be quite significant for both CMS and the affected EPs. Especially for smaller dollar claims, it is possible that in 2015 the cost of reprocessing for CMS and EPs could exceed that payment adjustment. For example, a claim of $100 will be

reduced $1 or $2 in CY 2015. If that claim was reprocessed, CMS Medicare Administrative Contractors (MACs) would have to reprocess the claim, utilize the banking system to send the payment; the EP's accounting process would have to accept the new payment and update the old claim and possibly incur the costs of collecting or refunding coinsurance. As the payment adjustments increase, the balance between the cost of the payment adjustments weighed against the cost of claim reprocessing may shift. In addition, as time passes we also anticipate that the supply of CEHRT and supporting services will increase to better match demand, lessening the concerns presented by the commenters. Therefore, we are finalizing the EHR reporting period for determining whether an EP is subject to the payment adjustment for CY 2015 and subsequent calendar years as proposed. The issue requiring all providers regardless of stage of meaningful use to upgrade to 2014 CEHRT is addressed by ONC in their final rule published elsewhere in this issue of the **Federal Register**. We note that all providers, regardless of stage, will use a 3-month EHR reporting period in 2014.

c. Exception to the Application of the Payment Adjustment to EPs in CY 2015 and Subsequent Calendar Years

As previously discussed, section 1848(a)(7)(B) of the Act provides that the Secretary may, on a case-by-case basis, exempt an EP from the application of the payment adjustments in CY 2015 and subsequent CYs if the Secretary determines that compliance with the requirements for being a meaningful EHR user will result in a significant hardship, such as in the case of an EP who practices in a rural area without sufficient Internet access. As provided in the statute, the exception is subject to annual renewal, but in no case may an EP be granted an exception for more than 5 years. We note that the HITECH Act does not obligate the Secretary to grant exceptions. Nonetheless, in the proposed rule, we expressed our belief that there are hardships for which an exception should be granted. We therefore proposed three types of exceptions in the proposed rule and discussed a potential fourth. The three proposed exceptions were, by definition, time limited and we stated that the circumstances justifying such exceptions should not be present for more than 5 years. The fourth exception related to certain EPs and did not, by definition, involve time limited circumstances. Nevertheless, we noted that the 5 year limitation is statutory and cannot be altered by regulations, and that barriers to achieving meaningful use should be minimized over time.

Comment: Some commenters suggested that the exception be granted for an all 5 years rather than an annual determination to reduce the burden on EPs seeking the exception and the burden on CMS to process the exceptions.

Response: Section 1848(a)(7)(B) of the Act makes the hardship exception subject to annual renewal. Therefore, we would not grant an exception for more than 1 year unless we are certain that the circumstances that qualify an EP for an exception will not change for 5 years. The only such definitive case is for new EPs, and we grant a 2-year exception for such new EPs, because the date when an individual becomes an EP is a fixed point in time and not subject to change. However, all other exceptions discussed in the proposed rule depend on variable circumstances and could change from year to year. For example, although the exception we are finalizing for certain EPs (see § 495.102(d)(4)(iv)) could depend on scope of practice, which may be relatively fixed, it also depends on the ability to control the availability of CEHRT, which could easily change from year to year. Therefore, for these cases, we are not adopting this recommendation, and are finalizing a requirement for annual renewal.

As mentioned previously, we proposed three specific exceptions and a potential fourth in the proposed rule. First, we proposed that the Secretary may grant an exception to EPs who practice in areas without sufficient Internet access. We noted that section 1848(a)(7)(B) of the Act specifically allows the Secretary to establish a significant hardship ''in the case of an eligible professional who practices in a rural area without sufficient Internet access.'' However, our proposal recognized that a nonrural area may also lack sufficient Internet access to make complying with the requirements for being a meaningful EHR user a significant hardship for an EP.

We noted that exceptions on the basis of insufficient Internet connectivity must intrinsically be considered on a case-by-case basis. Therefore, we proposed to require that EPs must demonstrate insufficient Internet connectivity to qualify for the exception through an application process. As we discussed in the proposed rule, the rationale for this exception is that lack of sufficient Internet connectivity renders compliance with the meaningful EHR use requirements a hardship, particularly for meeting those meaningful use objectives requiring Internet connectivity, such as, summary of care documents, electronic prescribing, making health information available online, and submission of public health information. Therefore, we proposed that the application must demonstrate insufficient Internet connectivity to comply with the meaningful use objectives and that there are insurmountable barriers to obtaining such infrastructure, such as a high cost of extending the Internet infrastructure to their facility. We also proposed that an EP must establish the existence of the hardship was for the year that is 2 years prior to the payment adjustment year. Therefore, we proposed to require that applications be submitted no later than July 1 of the calendar year before the payment adjustment year in order to provide sufficient time for a determination to be made and for the EP to be notified about whether an exception has been granted prior to the payment adjustment year. This proposed timeline for submission and consideration of hardship applications was intended to allow sufficient time to adjust our payment systems so that payment adjustments are not applied to EPs who have received an exception for a specific payment adjustment year.

In our proposed rule, we also encouraged EPs to apply for the exception as soon as possible, which is after the first 90 days (the earliest EHR reporting period) of CY 2013. If applications are submitted close to or on the latest date possible (that is, July 1, 2014 for the 2015 payment adjustment year), then the applications could not be processed in sufficient time to conduct an EHR reporting period in CY 2014 in the event that the application is denied.

Comment: Commenters stated universal support for this exception. However, commenters expressed the concern about the situation of an EP who might have sufficient internet access in the 2 years prior, but lose it in 2014.

Response: We are finalizing our proposed significant hardship exception for insufficient Internet connectivity with one modification. We believe that it is extremely unlikely that an EP would lose sufficient internet access at one location. However, an EP may relocate to a location without sufficient Internet access. Therefore, we are finalizing our proposal with the modification to allow for the demonstration of insufficient internet access for any 90-day continuous period between the start of the year 2 years prior to the payment adjustment year and through the application submission

date of July 1 of the year prior to the payment adjustment year. The 90-day period should be within this timeframe (for example, for payment adjustment year 2015, the hardship would need to be shown for any continuous 90-day period that begins on or after January 1, 2013 and ends on or before July 1, 2014.

Second, we proposed to provide an exception for new EPs for a limited period of time after the EP has begun practicing. Newly practicing EPs will not be able to demonstrate that they are meaningful EHR users for a reporting period that occurs prior to the payment adjustment year. Therefore, we proposed that for 2 years after they begin practicing, EPs could receive an exception from the payment adjustments that will otherwise apply in CY 2015 and thereafter. We also proposed that, for purposes of this exception, an EP who switches specialties and begins practicing under a new specialty will not be considered newly practicing. For example, an EP who begins practicing in CY 2015 will receive an exception from the payment adjustments in CYs 2015 and 2016. However, as discussed previously, the new EP will still be required to demonstrate meaningful use in CY 2016 in order to avoid being subject to the payment adjustment in CY 2017. In the absence of demonstrating meaningful use in CY 2016, an EP who had begun practicing in CY 2015 will be subject to the payment adjustment in CY 2017. We proposed to employ an application process for granting this exception, and will provide additional information on the timeline and form of the application in guidance subsequent to the publication of the final rule.

Comment: Commenters stated universal support for this exception in public comments, and we are finalizing this exception as proposed for the reasons outlined in the proposed rule.

Third, we proposed an additional exception in this final rule for extreme circumstances that make it impossible for an EP to demonstrate meaningful use requirements through no fault of her own during the reporting period. Such circumstances might include: a practice being closed down; a hospital closed; a natural disaster in which an EHR system is destroyed; EHR vendor going out of business; and similar circumstances. Because exceptions on extreme, uncontrollable circumstances must be evaluated on a case-by-case basis, we proposed to require EPs to qualify for the exception through an application process.

Comment: Many commenters supported this exception. However a number of the supporters requested that various circumstances be added to the list of example circumstances that we provided. These examples dealt primarily with concerns related to vendors of CEHRT. Specifically, commenters were concerned about vendors of CEHRT not maintaining their certification status, ability to meet implementation schedules, and ability to find a vendor of CEHRT willing to work with them. In addition, commenters suggested that the provider facing severe financial distress, such as bankruptcy or restructuring of debt should be included as an example.

Response: In evaluating these circumstances, we considered whether first and foremost they met the criteria of making it impossible for the EP to demonstrate meaningful use requirements through no fault of his or her own during the EHR reporting period. Second, we considered whether they establish a definitive circumstance that would always rise to the level of the exception or whether they would be dependent on the individual scenario. We are including two examples submitted by commenters in the preamble of the final rule that match the former criteria. First, we would consider the case an EP whose CEHRT loses its certification either through revocation or because the vendor did not upgrade their CEHRT to the latest requirements as an extreme circumstance that might qualify for this exception. Second, we would consider the case of an EP suffering severe financial distress resulting in a bankruptcy or restructuring of debt as an extreme circumstance that might qualify for this exception.

We require applications to be submitted no later than July 1 of the calendar year before the payment adjustment year in order to provide sufficient time for a determination to be made and for the EP to be notified about whether an exception has been granted prior to the payment adjustment year. This timeline for submission and consideration of hardship applications also allows for sufficient time to adjust our payment systems so that payment adjustments are not applied to EPs who have received an exception for a specific payment adjustment year.

The purpose of this exception is to accommodate EPs who would have otherwise been able to become a meaningful EHR user and avoid the payment adjustment for a given year in the absence of the extreme circumstances they face. Therefore, it is necessary to establish whether the relevant circumstances exist during the EHR reporting period for a given payment adjustment year rather than the payment adjustment year itself. In the proposed rule, we explained the inherently case-by-case nature of this exception request. While we discussed circumstances that arise in ''either of the 2 calendar years before the payment adjustment year,'' our intent was to ensure that the regulations recognized the two different EHR reporting periods for new meaningful users (that is, those demonstrating meaningful use for the first time in the year immediately prior to the payment adjustment year), versus current meaningful users (that is, those demonstrating meaningful use in the calendar year that is two years before the payment adjustment year). Obviously, a ''current'' meaningful user, who is required under our regulations to demonstrate meaningful use in the calendar year two years before the payment adjustment year, may not receive an exception for circumstances that occur after that reporting period. While a new meaningful user might be able to demonstrate that extreme circumstances that occurred prior to the reporting period continue to warrant an exception, we believe the case-by-case nature of the exception requests would allow such ''new'' meaningful users this opportunity to demonstrate that a significant hardship continues to exist during the reporting period. Therefore, in this final rule, we are clarifying our regulation to distinguish between new and current meaningful users, to be clear that the extreme circumstances must exist during the period in which the provider would otherwise be required to demonstrate meaningful use. EPs should apply for this exception on the basis of circumstances arising in the CY 2 years prior to the payment adjustment year, or, in the case of EPs who have never attested to meaningful use, the year immediately prior to the payment adjustment year.

Finally, we solicited comment on the appropriateness of granting a fourth exception for EPs meeting certain specific general criteria that might render demonstration of meaningful use very difficult. The criteria that we discussed were—

- Lack of face-to-face or telemedicine interaction with patients, thereby making compliance with meaningful use criteria more difficult. Meaningful use requires that a provider collect a considerable amount of information about the patient and is able transport information online (to a PHR, to another provider, or to a patient) and is significantly easier if the provider has direct contact with the patient and a need for follow up care or contact. Certain physicians often do not have a consultative interaction with the

patient. For example, pathologist and radiologists seldom have direct consultations with patients. Rather, they typically submit reports to other physicians who review the results with their patients;

• Lack of follow up with patients. Again, the meaningful use requirements for collecting information about the patient and transporting information online are significantly easier to meet if a provider has direct contact with a patient and a need to follow-up with the patient; and

• Lack of control over the availability of CEHRT at their practice locations.

In our proposed rule, we stated that we did not believe any one of these barriers taken independently would constitute an insurmountable hardship; however, our experience with Stage 1 of meaningful use suggests that, taken together, they may pose a substantial obstacle to achieving meaningful use. Therefore, we discussed several options in the proposed rule. One option was to provide a time-limited, 2-year payment adjustment exception for all EPs who meet the previous criteria. This approach would allow us to reconsider this issue in future rulemaking. Another option was to provide such an exception with no specific time limit. However, we noted that even under this less restrictive option, by statute no individual EP can receive an exception for more than 5 years. As discussed earlier, we believe the proliferation of both CEHRT and health information exchange will reduce the barriers faced by specialties with less CEHRT adoption over time as other providers may be providing the necessary data for these specialties to meet meaningful use. We particularly requested comment on how soon EPs who meet the previous criteria will reasonably be able to achieve meaningful use.

In the proposed rule, we encouraged comment on whether these criteria, or additional criteria not accounted for in the meaningful use exclusions, constitute a significant hardship to meeting meaningful use. We indicated that we that we would consider whether to adopt an exception based on these or similar criteria in the final rule, and, if so, whether such an exception should apply to individual EPs or across-the-board based on specialty or other groupings that generally meet the appropriate criteria.

Comment: Numerous commenters expressed support for including this exception. Some commenters agreed with CMS' assertion that all three barriers must be in place for this to be considered a significant hardship, while others maintained that any one of these barriers constitutes a significant hardship. Commenters from specific groups also presented arguments that they face one or more (up to all three) of the barriers presented in a sufficiently uniform way to have the exception apply across the board to their group.

Response: After reviewing the comments on this issue, we believe that the hardships presented are significant. Some EPs in the specialties that face all three barriers have already successfully attested to meaningful use. Thus, even when all three barriers are present, meaningful use may be difficult, but not impossible to achieve. In establishing the criteria for meaningful use itself, we have adopted exclusions and constructed the measures to lower the first two barriers as much as possible. For example, EPs with no office visits (that is, without direct patient contact) do not have to provide visit summaries, nor do they have to provider patient reminders. Due to both the allowances built into the meaningful use criteria and the fact at least a few EPs in nearly all specialties have attested to meaningful use, we do not believe that each barrier stands alone as a significant hardship. However, in considering the hardships and how they would be overcome there are significant differences between the first two and the latter (lack of control of CEHRT). Lack of face-to-face and need for follow up are both overcome through robust health information exchange. However, we do not believe that the existing availability health information exchange is sufficient to overcome these hardships. Therefore, we are finalizing an exception for those EPs who lack both face-to-face interactions with patients and those who lack the need to follow up with patients. An EP may apply for this exception only on the grounds that they meet both of these criteria (lack of face-to-face interactions and lack the to follow up with patients). We consider lack of face-to-face and need for follow-up care to be situations where the EP has no or nearly no face-to-face patient interactions or need for follow-up care. The EP would need to demonstrate either a complete lack of face-to-face interactions and follow-up or that cases of face-to-face interaction and follow-up are extremely rare and not part of normal scope of practice for that EP.

In reviewing the arguments presented for a group determination as well as considering common knowledge about the scope of practice of various specialties, we agree with commenters that the specialties of anesthesiology, radiology, and pathology lack face-to-face interactions and need to follow up with patients with sufficient frequency to warrant granting an exception to each EP with one of these primary specialties. We note that anesthesiologists do interact with patients, but not in a manner that is conducive to collecting the information needed for many aspects of meaningful use. As discussed previously, this exemption is subject to annual renewal. In future rulemaking we will consider whether the proliferation of health information exchange or any other developments are sufficient to remove lack of face-to-face interaction as a barrier, and whether the proliferation of CEHRT is sufficient to remove lack of control over the availability of CEHRT as a barrier. We will consider these issues in relation both to the exception itself and its application to the specialties of anesthesiology, radiology, and pathology. As such, physicians in these three specialties should not expect that this exception will continue indefinitely, nor should they expect that we will grant the exception for the full 5-year period permitted by statute. We will consider the extent to which these specialties continue to face these barriers in the Stage 3 rule and in other future rulemaking. We will also work to develop strategies to assist physicians who lack face-to-face interactions and the need to follow up with patients in demonstrating meaningful use. We may develop such strategies in the context of future rulemaking (for example, the Stage 3 rule) or in the form of additional guidance to physicians in these specialties. We also encourage all anesthesiologists, radiologists, and pathologists to continue to build out their ability to participate in health information exchange, adopt CEHRT and apply for the Medicare or Medicaid EHR incentives. Those seeking the Medicare EHR incentives can start through 2014, while those seeking the Medicaid EHR incentives can start through 2016.

As hospital-based anesthesiologists, radiologists, and pathologists are not eligible for the incentive and are thus exempted from the payment adjustment, the exception discussed in this section relates to these specialists in nonhospital settings.

With regard to the third barrier (lack of control over the availability of CEHRT at practice locations), we believe that in cases where an EP practices at multiple locations just this one barrier could be sufficient to constitute a significant hardship. In such cases, the EP would have to truly have no control over the availability of CEHRT. Control does not imply final decision-making authority. For example, we would

generally view EPs practicing in a large, corporate, group as having control over the availability of CEHRT, because they can influence the group's purchase of CEHRT, they may reassign their claims to the group, they may have a partnership/ownership stake in the group, or any payment adjustment would affect the group's earnings, and the entire impact would not be borne by the individual EP. These EPs can influence the availability of CEHRT and the group's earnings are directly affected by the payment adjustment. Thus, such EPs would not, as a general rule, be viewed as lacking control over the availability of CEHRT and would not be eligible for the hardship exception based solely on their membership in a group practice that has not adopted CEHRT.

On the other hand, there are EPs who practice at multiple locations who truly have little to no control over whether CEHRT is available at their locations. These might include, surgeons using ambulatory surgery centers or physicians treating patients in a nursing home. In these cases, the surgeon or physician likely would bear the entire impact of any payment adjustment—and such adjustment would not affect the earnings of the ambulatory surgery center or nursing home. In addition, because the surgeon or physician merely sees patients at the center or home, and does not have any other interest in the facility, we believe they would exert little to no influence over whether the nursing home, center, or other similar outpatient site adopts and implements CEHRT.

We note that we already have in place an eligibility requirement that allows for an EP to still qualify as a meaningful EHR user even if up to 49.9 percent of the EP's outpatient encounters are in locations that lack CEHRT. Thus, our exception would apply only in the case of EPs practicing in multiple locations where the lack of control (as discussed previously) exists for a majority (50 percent or more) of their outpatient encounters at such locations, causing such EPs to not be eligible to become meaningful EHR users. (In addition, we wish to make clear that we will not grant the exception to EPs that lack control in their practice locations but where those locations have adopted CEHRT would mean that the EP could become a meaningful EHR user.)

For the reasons discussed earlier, we have adopted a final regulation that allows an EP practicing at multiple locations to demonstrate that the EP was truly unable to control the availability of CEHRT at either one or a combination of locations that constitute more than 50 percent of their outpatient encounters. Inpatient hospital and emergency department encounters would not be included in either the numerator or the denominator for purposes determining whether the 50 percent threshold is met. This approach is consistent with the categories of encounters that are considered to be outpatient for purposes of determining hospital based status. (As noted previously, the locations cited by the EP for purposes of qualifying for this exception could not have CEHRT available—otherwise, we would view the EP as being potentially able to demonstrate meaningful use.)

After considering the public comments, we are finalizing an exception by adding a new § 495.102(d)(4)(iv) to the regulations. EPs whose primary specialty is listed in PECOS as anesthesiology, radiology or pathology 6 months prior to the first day of the year in which payment adjustments that would otherwise apply will be deemed to qualify for this exception, subject to the 5-year limit that applies to all exceptions under this paragraph.

Comment: Many commenters requested that these and other commenter proposed exceptions apply to other programs besides the Medicare EHR incentive program.

Response: This final rulemaking focuses on the EHR Incentive program, and we did not propose to make changes to other programs. We encourage interested parties to submit comments on proposed rules (if any) for those other programs.

Comment: Commenters suggested the following additional exceptions:

- All EPs over 60 or eligible for Social Security and for all practices with 5 or fewer physicians.
- EPs who make a good faith effort, but fail to reach the thresholds thereby making a distinction between those who make an effort and those who do not attempt to become meaningful EHR user.
- EP is not practicing for a significant period of time during the reporting period.
- EP working in a practice without CEHRT changes to a new practice that has CEHRT during the reporting period.

Response: We address each of these in turn. We agree that there is evidence that older EPs and those in smaller practices have been slower to adopt CEHRT.[6] [7] The HITECH Act even acknowledged the problems for smaller practices by creating assistance programs for EPs in individual or small practices in Title XIII, section 3012(c)(4) of the Act. However, based on attestation information submitted to us, EPs in both groups are successfully meeting meaningful use in significant numbers. Therefore, we do not believe that either an EP's age or practice size constitutes a significant hardship. In addition, we believe it would be problematic to exempt a category of EPs based on age or size of practice given that the intent of the payment adjustments and incentives is to ensure widespread modernization to electronic health records. We do not believe that these elements, in themselves, demonstrate that the EP experiences a ''significant hardship'' in becoming a meaningful EHR user.

The next exception suggested by commenters is for EPs who attempt to become a meaningful EHR user, but fail to do so. Because we have already adopted an exception for EPs who face circumstances beyond their control, the application of this suggested exception would necessarily be limited to EPs who face normal difficulties, rather than significant hardship, in becoming meaningful EHR users. Again, the statute requires demonstration of a significant hardship as the basis for an exception, and we do not believe that a good faith attempt, in and of itself, demonstrates the existence of a significant hardship exists sufficient to prevent the EP from becoming a meaningful EHR user. Furthermore, Congress set the benchmark for receiving full payment, without being subject to payment adjustment, on the achievement of meaningful use rather than on the attempt to achieve meaningful use. Therefore, we do not believe that EPs who attempt, but fail, to meet meaningful use and do not qualify for one of our other exceptions should be granted a significant hardship exception.

We also do not believe that it is appropriate to establish an exception for EPs not practicing for significant time periods during the EHR reporting period. First, we already proposed (and are finalizing) an exception for newly practicing EPs. Second, EPs who are not newly practicing, but only practice for part of the EHR reporting period should be able to report in the numerator and denominators simply the numbers that pertain to the time during which they

[6] Chun-Ju Hsiao, Sandra L. Decker, Esther Hing and Jane E. Sisk. Most Physicians Were Eligible For Federal Incentives In 2011, But Few Had EHR Systems That Met Meaningful Use Criteria, Health Affairs, 31, No. 5 (2012).

[7] Sandra L. Decker, Eric W. Jamoom and Jane E. Sisk. Physicians In Nonprimary Care And Small Practices And Those Age 55 And Older Lag In Adopting Electronic Health Records Systems, Health Affairs, 31, No. 5 (2012).

are practicing. For example, a measure based on number of patients seen or actions taken would include only those patients/actions during the time the EP is practicing during the applicable reporting period. We recognize that some meaningful use measures, such as drug-drug and drug-allergy interaction checks, require a functionality to be enabled for the entire EHR reporting period. In this case, the EP would have the functionality enabled for the period s/he is practicing.

The final exception suggested by commenters is for an EP working in a practice without CEHRT who changes to a new practice with CEHRT. Again, the commenters did not explain why such a circumstance, by itself, supports a significant hardship that prevents the EP from becoming a meaningful EHR user. Moreover, if the EP has never demonstrated meaningful use he or she should have an initial 90-day reporting period that allows the EP to demonstrate meaningful use in a shorter period. In addition, under current guidance, if the EP has more than 50 percent of their outpatient encounters at the new practice equipped with CEHRT then they would be able to exclude the old practice from their meaningful use measures.

After considering the public comments, we are not finalizing these exceptions recommended by the commenters. The following table summarizes the timeline for EPs to avoid the applicable payment adjustment by demonstrating meaningful use or qualifying for an exception from the application of the payment adjustment:

TABLE 13—TIMELINE FOR ELIGIBLE PROFESSIONALS (OTHER THAN HOSPITAL-BASED) TO AVOID PAYMENT ADJUSTMENT

EP payment adjustment year (calendar year)	Demonstrate MU during EHR reporting period 2 years prior to year of payment adjustment	or	For an EP demonstrating meaningful use for the first time in the year prior to the payment adjustment year, EHR reporting period is a continuous 90-day reporting period beginning no later than	or	Apply or otherwise qualify for an exception no later than
2015	CY 2013 (with submission no later than February 28, 2014).		July 3, 2014 (with submission no later than October 1, 2014).		July 1, 2014.
2016	CY 2014 (with submission no later than February 28, 2015).		July 3, 2015 (with submission no later than October 1, 2015).		July 1, 2015.
2017	CY 2015 (with submission no later than February 29, 2016).		July 3, 2016 (with submission no later than October 1, 2016).		July 1, 2016.
2018	CY 2016 (with submission no later than February 28, 2017).		July 3, 2017 (with submission no later than October 1, 2017).		July 1, 2017.
2019	CY 2017 with submission no later than February 28, 2018).		July 3, 2018 (with submission no later than October 1, 2018).		July 1, 2018.

Notes: (CY refers to the calendar year, January 1 through December 31 each year.)
The timelines for CY 2020 and subsequent calendar years will follow the same pattern.

TABLE 14—PERIOD HARDSHIP MUST BE SHOWN WITH APPLICATION DATE

Exception	Period of consideration for exception	Application for CY 2015 submitted no later than
Insufficient internet access	Demonstrate insufficient internet access for any continuous 90-day period from the start of the CY 2 years prior to the payment adjustment year to July 1 of the year prior to the payment adjustment year (For CY 2015—January 1, 2013–July 1, 2014).	July 1, 2014.
New EP	New EP granted an exception for the year they become an EP and the following year (For CY 2015, the EP would have to be new in either CY 2014 or CY 2015).	Guidance to be issued following publication of the final rule.
Extreme Circumstances outside of the EP's Control.	For an EP who has previously demonstrated meaningful use, the EP must demonstrate extreme circumstances that affect either of the CYs in the 2 years prior to the payment adjustment year. (For CY 2015–CY 2013). For EPs who have never demonstrated meaningful use, the EP must demonstrate extreme circumstances that affect the CY prior to the payment adjustment year. (For CY 2015–CY 2014).	July 1, 2014.
Lack of Face-Face/Telemedicine Patient Interactions and Lack of Need for Follow Up Care,.	The CY 2 years prior to the payment adjustment year (For CY 2015–CY 2013) through the application deadline..	For applications only: July 1, 2014.
Lack of Control Over Availability of CEHRT for EPs practicing in multiple locations.	For all EPs, if they are registered in PECOS with a primary specialty of anesthesiology, pathology or radiology 6 months prior to first day of the payment adjustment year they meet the exception. (For CY 2015—July 1, 2014)	

d. HPSA Bonus Technical Change

In this final rule we are also making a technical change to our regulations to correctly reflect our policy on EPs who predominantly furnish services in a geographic HPSA. This change is necessary to reflect the current policy that the 50 percent determination is based on the covered professional services provided during the payment year, in accordance with the preamble discussion in the Stage 1 final rule (75 FR 44444 through 44445). The current regulation erroneously uses the phrase ''the year prior to the payment year,'' which conflicts with our preamble discussion in both the proposed (75 FR 1908 through 1909) and final Stage 1 rules. We note that we are not changing the policy (already adopted) that the HPSA must be so designated by December 31 of the year prior to the payment year.

e. Payment Adjustment Not Applicable to Hospital-Based EPs

Section 1848(a)(7)(D) of the Act provides that no EHR payment adjustments otherwise applicable for CY 2015 and subsequent years ''may be made * * * in the case of a hospital-based eligible professional (as defined in subsection (o)(1)(C)(ii)) of the Act.'' We proposed that the same definition of hospital-based should apply during the incentive and payment adjustment phases of the Medicare EHR incentive program (that is, those eligible to receive incentives will also be subject to adjustments). Therefore, we proposed that our regulations at § 495.100 and § 495.102(d) would retain, during the payment adjustment phase of the EHR Incentive Program, the definition of hospital-based eligible professional at § 495.4. For purposes of the Medicare EHR incentive payment program, the determination of whether an EP is hospital-based is made on the basis of data from ''the Federal FY prior to the payment year.'' In the preamble to the Stage 1 final rule (75 FR 44442), we also stated that ''in order to provide information regarding the hospital-based status of each EP at the beginning of each payment year, we will need to use claims data from an earlier period. Therefore, we will use claims data from the prior fiscal year (October through September). Under this approach, the hospital-based status of each EP will be reassessed each year, using claims data from the fiscal year preceding the payment year. The hospital-based status will be available for viewing beginning in January of each payment year.''

We proposed to retain the concept established in the Stage 1 final rule (75 FR 44442) of making hospital-based determinations based upon a prior fiscal year of data. However, in the proposed rule we expressed concern about ensuring that EPs are aware of their hospital-based status in time to purchase EHR technology and meaningfully use it during the EHR reporting period that applies to a payment adjustment year. EPs who believe that they are not hospital based will have already either worked towards becoming meaningful EHR users or planned for the payment adjustment. EPs who believe that they will be determined hospital based may not have done so. EPs in these circumstances will need to know they are not hospital based in time to become a meaningful EHR user for a 90-day EHR reporting period in the year prior to the payment adjustment year. To use the example of the CY 2015 payment adjustment year, a determination based on FY 2013 data will allow an EP to know whether he or she is hospital-based by January 1, 2014. This timeline would give the EP approximately 6 months to begin the EHR reporting period, which could last from July through September of 2014. We stated in the proposed rule that we did not believe this to be sufficient time for the EP to implement CEHRT. Therefore, we proposed to base the hospital based determination for a payment adjustment year on determinations made 2 years prior. Again using CY 2015 payment adjustment year as an example, the determination would be available on January 1, 2013 based on FY 2012 data. This proposed determination date will give the EP up to 18 months to implement CEHRT and begin the EHR reporting period to avoid the CY 2015 payment adjustment. In the proposed rule, we asserted that this a reasonable time frame to accommodate a difficult situation for some EPs. However, we also are aware that there may be EPs who are determined nonhospital-based under this ''2-years prior'' policy when they will be determined hospital-based if we made the determination just 1-year prior. Again, using the example of the CY 2015 payment adjustment year, an EP determined nonhospital-based as of January 1, 2013 (using FY 2012 data) may be found to be hospital-based as of January 1, 2014 (using FY 2013 data). In this situation, we stated in the proposed rule that we did not believe the EP should be penalized for having been nonhospital-based as of January 1, 2013, especially if the EP has never demonstrated meaningful use, and the EP's first EHR reporting period will have fallen within CY 2014. Therefore, in the proposed rule we requested comments on expanding the hospital-based determination to encompass determinations made either 1 or 2 years prior. Under this alternative, if the EP were determined hospital based as of either one of those dates, then the EP would be exempt from the payment adjustments in the corresponding payment adjustment year. This would mean that for the CY 2015 payment adjustment year, an EP determined hospital based as of either January 1, 2013 (using FY 2012 data) or January 1, 2014 (using FY 2013 data) would not be subject to the payment adjustment. In all cases, we would need to know that the EP is considered hospital based in sufficient time for the payment adjustment year.

Comment: Commenters provided only general supportive comments on this proposal.

Response: We thank the commenters for the support. For the reasons stated in the proposed rule, we are finalizing a rule that will determine hospital based using either of the following fiscal year's data: (1) The fiscal year before the year that is 1 year prior to the payment adjustment year (for example, FY 2013 data for payment adjustment year 2015); or (2) the fiscal year before the year that is 2 years prior to the payment adjustment year (for example, FY 2012 data for payment adjustment year 2015). If the data from either year result in a hospital-based determination, then the EP would not be subject to the payment adjustments for the relevant year.

We discuss one aspect of determining hospital-based status, specifically the circumstances of EPs who fund the acquisition, implementation, and maintenance of their own CEHRT in a hospital-based setting, in section II.C.3. of the preamble to this final rule.

3. Incentive Market Basket Adjustment Effective in FY 2015 and Subsequent Years for Eligible Hospitals That Are Not Meaningful EHR Users for an Applicable Reporting Period

Section 1886(b)(3)(B)(ix)(I) of the Act, as amended by section 4102(b)(1) of the HITECH Act, provides for an adjustment to the applicable percentage increase to the IPPS payment rate for those eligible hospitals that are not meaningful EHR users for the associated EHR reporting period for a payment year, beginning in FY 2015. Specifically, section 1886(b)(3)(B)(ix)(I) of the Act provides that, ''for FY 2015 and each subsequent FY,'' an eligible hospital that is not ''a meaningful EHR user * * * for an EHR reporting period'' will receive a reduced update to the IPPS standardized amount. This reduction will apply to ''three-quarters of the percentage increase otherwise applicable.'' The reduction to three-quarters of the applicable update for an eligible hospital that is not a meaningful EHR user will be ''33⅓ percent for FY 2015, 66⅔ percent for FY 2016, and 100 percent for FY 2017 and each subsequent FY.'' In other words, for eligible hospitals that are not meaningful EHR users, the Secretary is required to reduce the percentage increases otherwise applicable by 25 percent (33⅓ percent of 75 percent) in 2015, 50 percent (66⅔ percent of 75 percent) in FY 2016, and 75 percent (100 percent of 75 percent) in FY 2017 and subsequent years. Section 4102(b)(1)(B) of the HITECH Act also provides that such ''reduction shall apply only with respect to the FY involved and the Secretary shall not take into account such reduction in computing the applicable percentage increase * * * for a subsequent FY.''

TABLE 15—PERCENTAGE DECREASE IN APPLICABLE HOSPITAL PERCENTAGE INCREASE FOR HOSPITALS THAT ARE NOT MEANINGFUL EHR USERS

	2015	2016	2017+
Hospital payment update is subject to EHR payment reduction	25%	50%	75%

Section 1886(b)(3)(B)(ix)(II) of the Act, as amended by section 4102(b)(1) of the HITECH Act, provides that the Secretary may, on a case-by-case basis exempt a hospital from the application of the percentage increase adjustment for a fiscal year if the Secretary determines that requiring such hospital to be a meaningful EHR user will result in a significant hardship, such as in the case of a hospital in a rural area without sufficient Internet access. This section also provides that such determinations are subject to annual renewal, and that in no case may a hospital be granted such an exemption for more than 5 years.

Finally section 1886(b)(3)(B)(ix)(III) of the Act, as amended by section 4102(b)(1) of the HITECH Act, provides that, for FY 2015 and each subsequent FY, a state in which hospitals are paid for services under section 1814(b)(3) of the Act shall adjust the payments to each eligible hospital in the state that is not a meaningful EHR user in a manner that is designed to result in an aggregate reduction in payments to hospitals in the state that is equivalent to the aggregate reduction that will have occurred if payments had been reduced to each eligible hospital in the state in a manner comparable to the reduction in section 1886(b)(3)(B)(ix)(I) of the Act. This section also requires that the state shall report to the Secretary the method it will use to make the required payment adjustment. (At present, section 1814(b)(3) of the Act applies to the State of Maryland.) As we discussed in the Stage 1 final rule establishing the EHR incentive program (75 FR 44448), for purposes of determining whether hospitals are eligible for receiving EHR incentive payments, we employ the CMS Certification Number (CCN). We also proposed to use CCNs to identify hospitals for purposes of determining whether the reduction to the percentage increase otherwise applicable for FY 2015 and subsequent years applies. (In other words, whether a hospital was a meaningful EHR user for the applicable EHR reporting period will be dependent on the CCN for the hospital.) We noted the results of this policy for certain cases in which hospitals change ownership, merge, or otherwise reorganize and the applicable CCN changes. In cases where a single hospital changes ownership, we determine whether to retain the previous CCN or to assign a new CCN depending upon whether the new owner accepts assignment of the provider's prior participation agreement. Where a change of ownership has occurred, and a new CCN is assigned due to the new owner's decision not to accept assignment of the prior provider agreement, we proposed not to recognize a meaningful use determination that was established under the prior CCN for purposes of determining whether the payment adjustment applies. Where the new owner accepts the prior provider agreement and is assigned the same CCN, we proposed to continue to recognize the demonstration of meaningful use under that CCN. The same policy was proposed for merging hospitals that use a single CCN. For example, if hospital A is not a meaningful EHR user (for the applicable reporting period), and it absorbs hospital B, which was a meaningful EHR user, then the entire hospital will be subject to a payment adjustment if hospital A's CCN is the surviving identifier. The converse is true as well—if it were hospital B's CCN that survived, the entire merged hospital will not be subject to a payment adjustment. (The guidelines for determining CCN assignment in the case of merged hospitals are described in the State Operations Manual, sections 2779Aff. *http://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs-Items/CMS1201984.html*) We advised hospitals that are changing ownership, merging, or otherwise reorganizing to take this policy into account.

Comments received on the treatment of CCNs and new hospitals are addressed in the context of discussing our exception for new hospitals later in this section.

a. Applicable Market Basket Adjustment for Eligible Hospitals Who Are Not Meaningful EHR Users for FY 2015 and Subsequent FYs

In the stage 1 final rule on the Medicare and Medicaid Electronic Health Record Incentive Payment Programs, we revised § 412.64 of the regulations to provide for an adjustment to the applicable percentage increase update to the IPPS payment rate for those eligible hospitals that are not meaningful EHR users for the EHR reporting period for a payment year, beginning in FY 2015. Specifically, § 412.64(d)(3) now provides that—

• Beginning in fiscal year 2015, in the case of a ''subsection (d) hospital,'' as defined under section 1886(d)(1)(B) of the Act, that is not a meaningful electronic health record (EHR) user as defined in part 495, three-fourths of the applicable percentage change specified in paragraph (d)(1) is reduced—

++ For fiscal year 2015, by 33⅓ percent;

++ For fiscal year 2016, by 66⅔ percent; and

++ For fiscal year 2017 and subsequent fiscal years, by 100 percent.

In order to conform with this new update reduction, as required in section 4102(b)(1)(A) of the HITECH Act, we also revised § 412.64(d)(2)(C) of our regulations to provide that, beginning with FY 2015, the reduction to the IPPS applicable percentage increase for failure to submit data on quality measures to the Secretary shall be one-quarter of the applicable percentage increase, rather than the 2 percentage point reduction that applies for FYs 2007 through 2014 in § 412.64(d)(2)(B). The effect of this revision is that the combined reductions to the applicable percentage increase for meaningful EHR use and quality data reporting will not produce an update of less than zero for a hospital in a given FY as long as the hospital applicable percentage increase remains a positive number.

We did not propose any changes to the establishment of the payment adjustment amounts. We did propose the applicable EHR reporting period, for purposes of determining whether a hospital is subject to the applicable percentage increase adjustment for FY 2015 and subsequent FYs, as a prior EHR reporting period (as defined in § 495.4 of the regulations). We also proposed an amendment to § 412.64(d) to provide for the hardship and other exceptions we discuss later, as well as the application of the applicable percentage increase adjustment in FY 2015 and subsequent FYs to a state operating under a payment waiver provided by section 1814(b)(3) of the Act. We discuss these proposals and the

comments relating to them in the following sections of this preamble.

b. EHR Reporting Period for Determining Whether a Hospital Is Subject to the Market Basket Adjustment for FY 2015 and Subsequent FYs

Section 1886(b)(3)(B)(ix)(IV) of the Act makes clear that the Secretary has discretion to ''specify'' as the EHR reporting period ''any period (or periods)'' that will apply ''with respect to a fiscal year.'' Thus, as in the case of designating the EHR reporting period for purposes of the EP payment adjustment, the statute governing the applicable percentage increase adjustment for hospitals that are not meaningful users of EHR technology neither requires that such reporting period fall within the year of the payment adjustment, nor precludes the reporting period from falling within the year of the payment adjustment.

As in the case of EPs, we sought to avoid creating a situation in which it might be necessary to make large payment adjustments, either to lower or to increase payments to a hospital, after a determination is made about whether the applicable percentage increase adjustment should apply. We stated in the proposed rule that we believe that this consideration remains compelling in the case of hospitals, despite the fact that the IPPS for acute care hospitals provides, unlike the case of EPs, a mechanism to make appropriate changes to hospital payments for a payment year through the cost reporting process. Despite the availability of the cost reporting process as a mechanism for correcting over- and underpayments made during a payment year, we seek to avoid wherever possible circumstances under which it may be necessary to make large adjustments to the rate-based payments that hospitals receive under the IPPS. Since the EHR payment adjustment in FYs 2015 and subsequent years is an adjustment to the applicable percentage increase used in determining prospective payments, we believe that it is far preferable to determine whether the adjustment applies on the basis of an EHR reporting period before the payment period, rather than to make the adjustment (where necessary) in a settlement process after the payment period on the basis of a determination concerning whether the hospital was a meaningful user during the payment period.

Therefore, we proposed, for purposes of determining whether the relevant applicable percentage increase adjustment applies to hospitals who are not meaningful users of EHR technology in FY 2015 and subsequent years, that we would establish EHR reporting periods that begin and end prior to the year of the payment adjustment. Furthermore, we proposed that the EHR reporting periods for purposes of such determinations would be far enough in advance of the payment year that we have sufficient time to implement the system edits necessary to apply any required applicable percentage increase adjustment correctly, and that hospitals will know in advance of the payment year whether or not they are subject to the applicable percentage increase adjustment. Specifically, we proposed the following rules establishing the appropriate reporting periods for purposes of determining whether hospitals are subject to the applicable percentage increase adjustment in FY 2015 and subsequent years (parallel to the rules that we proposed previously for determining whether EPs are subject to the payment adjustments in CY 2015 and subsequent years):

- Except as provided in second bulleted paragraph for eligible hospitals that become meaningful users for the first time in 2014, we proposed that the EHR reporting period for the FY 2015 applicable percentage increase adjustment will be the same EHR reporting period that applies in order to receive the incentive for FY 2013. For hospitals this will generally be the full fiscal year of 2013 (unless FY 2013 is the first year of demonstrating meaningful use, in which case a 90-day EHR reporting period will apply). Under our proposed policy, a hospital that receives an incentive for FY 2013 would be exempt from the payment adjustment in FY 2015. A hospital that received an incentive for FYs 2011 or 2012 (or both), but that failed to demonstrate meaningful use for FY 2013 will be subject to a payment adjustment in FY 2015. (As all of these years will be for Stage 1 of meaningful use, we do not believe that it is necessary to create a special process to accommodate providers that miss the 2013 year for meaningful use). For each year subsequent to FY 2015, the EHR reporting period payment adjustment will continue to be the FY 2 years before the payment adjustment period, subject again to the special provision for new meaningful users of CEHRT.
- We proposed an exception for those hospitals that have never successfully attested to meaningful use prior to FY 2014. For these hospitals, as it is their first year of demonstrating meaningful use, we proposed to allow a continuous 90-day reporting period that begins in 2014 and that ends at least 3 months prior to the end of FY 2014. In addition, the hospital would have to actually successfully register for and attest to meaningful use no later than the date that occurs 3 months before the end of the year. For hospitals, this means specifically that the latest day the hospital must successfully register for the incentive program and attest to meaningful use, and thereby avoid application of the adjustment in FY 2015, is July 1, 2014. Thus, the hospital's EHR reporting period must begin no later than April 2, 2014 (allowing the hospital a 90-day EHR reporting period, followed by 1 extra day to successfully submit the attestation and any other information necessary to earn an incentive payment). In the proposed rule we used the date April 3, 2014 which would only allow an 89-day period through June 30, 2014. The correct date is April 2, 2014 to allow September 30, 2014 to be the last day of the 90-day EHR reporting period with the extra day (Oct 1, 2014) to attest. This policy would continue to apply in subsequent years. If a hospital is demonstrating meaningful use for the first time for the fiscal year immediately before the applicable percentage increase adjustment year, then the reporting period will be a continuous 90-day period that begins in such prior fiscal year and ends at least 3 months before the end of such year. In addition, all attestation, registration, and any other details necessary to determine whether the hospital is subject to a applicable percentage increase adjustment for the upcoming year will need to be completed by July 1. (As we discuss later, exception requests will be due by the April 1 before the beginning of the payment adjustment fiscal year.)

In conjunction with adopting these rules for establishing the EHR Reporting Period for determining whether a hospital is subject to the applicable percentage increase adjustment for FY 2015 and subsequent FYs, we proposed to revise § 412.64(d)(3) of our regulations to insert the phrase ''for the applicable EHR reporting period,'' so that it is clear that the EHR reporting period will not fall within the year of the market basket adjustment.

We stated our belief that these proposed EHR reporting periods provide adequate time both for the systems changes that will be required for CMS to apply any applicable percentage increase adjustments in FY 2015 and subsequent years, and for hospitals to be informed in advance of the payment year whether any adjustment(s) will apply. They also provide appropriate flexibility by allowing more recent adopters of EHR technology a

reasonable opportunity to establish their meaningful use of the technology and to avoid application of the payment adjustments.

Comment: As with the comments on the EHR reporting period for EPs, many commenters made the same assertion that an EHR reporting period aligned with the payment adjustment year would be more consistent with the Congressional intent and the language of the statute. Some commenters contended that the statutory language requires the reporting period and payment adjustment year to coincide.

Response: We believe our response to this comment in the context of the EP payment adjustments applies equally to his eligible hospital comment. The language in section 1886(b)(3)(B)(ix)(I) of the Act is substantially similar to the language in section 1848(a)(7) of the Act. As in the case of EPs, Congress provided the Secretary with flexibility to determine the EHR reporting period applicable to the payment adjustment year. Section 1886(b)(3)(B)(ix)(IV) of the Act specifically provides that ''term 'EHR reporting period' means, with respect to a fiscal year, any period (or periods) specified by the Secretary.'' In addition, because the payment adjustment will be used to reduce the applicable percent increase that is used in the prospective ratesetting for hospitals, it is reasonable to conclude that this Secretarial flexibility was granted precisely because Congress understood that the Department needed to have final determinations on meaningful use prior to the fiscal year that is the payment adjustment year. As we have previously noted, other payment adjustment programs, such as the e-prescribing program, and the physician quality reporting system, also use a prior reporting period. Thus, it is consistent for us to adopt a prior reporting period for the EHR program as well.

Comment: Commenters made the same comments as they did for EPs (relating to insufficient vendor capacity; the practical deadline having passed for adopting and implementing CEHRT, especially for popular vendors; and the issues surrounding upgrading current clients to 2014 CEHRT). As with EPs, the options presented by commenters all involved a reconciliation process, in this case, using the cost reporting process.

Response: The issue of upgrading to 2014 CEHRT is addressed by ONC in their final rule published elsewhere in this issue of the **Federal Register**. We appreciate the concerns of vendor capacity raised by the commenters. We discuss this situation and the reasons we are not revising our timetables in our previous discussion of the parallel policy for EPs. In the hospital context, the commenters correctly point out the existence of a payment reconciliation method, the hospital cost report, that it unavailable within the payment systems for EPs. We have carefully considered whether it is feasible to adopt a later reporting period (perhaps even the payment year itself) as the basis for determining whether eligible hospitals are subject to the EHR payment adjustment, and then to employ the cost reporting process to correct over and under payments in regards to the payment adjustments, as a number of commenters recommended. As a matter of course in the rate setting system, the basic rates and applicable percentage increase updates are fixed in advance and are not matters that are taken into account in the settlement of final payment amounts under the cost report reconciliation process. As the payment adjustment directly affects this rate we believe that it would not be possible to employ a cost report settlement process, but that claims would have to be reprocessed.

It is true, as several commenters pointed out, that several components of the IPPS, including DSH and IME payments, are settled in the cost reporting process on the basis of final data (for example, bed days, resident FTEs) from the payment year. However, changes in other aspects of the payment system, such as outlier payments, cannot reconciled within the cost reporting process, but require reprocessing of claims. Application of the EHR payment adjustment changes the standardized amount upon which IPPS payments are based. Any change in the standardized amount applicable to a hospital changes the number of outlier payments the hospital would receive, and the amount of those payments. If we were to base final determination of whether the EHR payment adjustment should apply on meaningful use status during the payment year, it would be necessary to increase the standardized amount for some hospitals, that is, those that were assumed not to meet meaningful use requirements for purposes of making interim payments, but that subsequently established meaningful use during the payment year. Conversely, it would be necessary to decrease the standardized amount for those hospitals that had been assumed to meet meaningful use requirements for purposes of making interim payments, but that subsequently failed to meet those requirements during the payment year. In both cases, mass reprocessing of payments would be necessary in order to adjust outlier payments. Generally, hospitals whose standardized amounts are decreased at the time of final payment determination (due to application of a payment adjustment that was not applied to interim payments) would generally receive greater outlier payments. Conversely, hospitals whose standardized amounts are increased at the time of final payment determination (due to application of the full update that was not applied to interim payments) would generally receive lower outlier payments. (Reprocessing would also be necessary for new technology add-on payments, although the claims volume and dollar amounts involved in such reprocessing would be significantly lower.) Such reprocessing imposes significant costs on both the eligible hospital and CMS. As in the case of EPs, then, we continue to believe that the timeline we proposed is the most realistic approach to making payment adjustment determinations in an effective manner.

Therefore, we are finalizing the proposed EHR reporting period for determining whether an eligible hospital is subject to the payment adjustment for CY 2015 and subsequent calendar years as proposed.

c. Exception to the Application of the Market Basket Adjustment to Hospitals in FY 2015 and Subsequent FYs

As mentioned previously, section 1886(b)(3)(B)(ix)(II) of the Act, as amended by section 4102(b)(1) of the HITECH Act, provides that the Secretary may, on a case-by-case basis exempt a hospital from the application of the applicable percentage increase adjustment for a fiscal year if the Secretary determines that requiring such hospital to be a meaningful EHR user will result in a significant hardship, such as in the case of a hospital in a rural area without sufficient Internet access. This section also provides that such determinations are subject to annual renewal, and that in no case may a hospital be granted such an exception for more than 5 years.

We proposed to add a new § 412.64(d)(4), specifying the circumstances under which we will exempt a hospital from the application of the applicable percentage increase adjustment for a fiscal year. To be considered for an exception, a hospital must submit an application demonstrating that it meets one more of the exception criteria.

As noted previously, the statute does not mandate the circumstances under which an exception must be granted,

but (as in the case of a similar exception provided under the statute for EPs) it does state that the exception may be granted when ''requiring such hospital to be a meaningful EHR user during such fiscal year will result in a significant hardship, such as in the case of a hospital in a rural area without sufficient Internet access.'' Therefore, we proposed to provide in new § 412.64(d)(4) that the Secretary may grant an exception to a hospital that is located in an area without sufficient Internet access. Furthermore, while the statute specifically states that such an exception may be granted to hospitals in ''a rural area without sufficient Internet access,'' it does not require that such an exception be restricted only to rural areas without such access. While we believe that a lack of sufficient Internet access will rarely be an issue in an urban or suburban area, we do not believe that it is necessary to preclude the possibility that, in very rare and exceptional cases, a nonrural area may also lack sufficient Internet access to make complying with meaningful use requirements a significant hardship for a hospital. Therefore, we proposed that the Secretary may grant such an exception to a hospital in any area without sufficient Internet access.

Because exceptions on the basis of insufficient Internet connectivity must intrinsically be considered on a case-by-case basis, we proposed to require hospitals to demonstrate insufficient Internet connectivity to qualify for the exception through an application process. The rationale for this exception is that lack of sufficient Internet connectivity renders compliance with the meaningful EHR use requirements a hardship particularly those objectives requiring Internet connectivity, summary of care documents, electronic prescribing, making health information available online, and submission of public health information. Therefore, we proposed that such an application must demonstrate insufficient Internet connectivity to comply with the meaningful use objectives listed previously and insurmountable barriers to obtaining such Internet connectivity such as high cost to build out Internet to their facility. As with EPs, the hardship would be demonstrated for period that is 2-years prior to the payment adjustment year (for example, FY 2013 for the payment adjustment in FY 2015). As with EPs, we will require applications to be submitted 6 months before the beginning of the payment adjustment year (that is, by April 1 before the FY to which the adjustment will apply) in order to provide sufficient time for a determination to be made and for the hospital to be notified about whether an exception has been granted. This timeline for submission and consideration of hardship applications also allows for sufficient time to adjust our payment systems so that payment adjustments are not applied to hospitals who have received an exception for a specific FY. (Please also see our previous discussion of the parallel exception for EPs, with respect to encouraging providers to file these applications as early as possible, and the likelihood that there will not be an opportunity to subsequently demonstrate meaningful use if hospitals file close to or at the application deadline of April 1.)

Comment: Commenters provided universal support for this proposed exception. However, some commenters raised concern about the situation of hospitals that might have Internet access in the 2-years prior, but lose it in the next year.

Response: We are finalizing this exception as proposed with one modification. We appreciate the commenters' concern about hospitals that might have sufficient Internet access in the 2 years prior to the adjustment period, but lose it in next year. We believe this is even less likely for hospitals than EPs, but as there is no downside to extending the time, we are finalizing a modification of our proposal to allow for the demonstration of insufficient Internet access for any 90-day period between the start of the year 2 years prior to the payment adjustment year through the application submission date of April 1 of the year prior to the payment adjustment year.

For the same reasons we proposed an exception for new EPs, we proposed an exception for a new hospital for a limited period of time after it has begun services. We proposed to allow new hospitals an exception for at least 1 full year cost reporting period after they accept their first patient. For example, a hospital that accepted its first patient in March of 2015, but with a cost reporting period from July 1 through June 30, would receive an exception from payment adjustment for FY 2015, as well as for FY 2016. However, the new hospital would be required to demonstrate meaningful use within the 9 months of FY 2016 (register and attest by July 1, 2016) to avoid being subject to the payment adjustment in FY 2017.

In proposing such an exception for new hospitals, however, we wanted to ensure that the exception would not be available to hospitals that have already been in operation in one form or another, perhaps under a different owner or merely in a different location, and thus have in fact had an opportunity to demonstrate meaningful use of EHR technology. Therefore, for purposes of qualifying for this exception, we proposed that the following hospitals would not be considered new hospitals under the exception:

- A hospital that builds new or replacement facilities at the same or another location even if coincidental with a change of ownership, a change in management, or a lease arrangement.
- A hospital that closes and subsequently reopens.
- A hospital that has been in operation for more than 2 years but has participated in the Medicare program for less than 2 years.
- A hospital that changes its status from a CAH to a hospital that is subject to the Medicare hospital in patient prospective payment systems.

It is important to note that we proposed to consider a hospital that changes its status from a hospital (other than a CAH) that is excluded from the Medicare hospital inpatient prospective payment system (IPPS) to a hospital that is subject to the IPPS to be a new hospital for purposes of qualifying for the proposed exception. These IPPS-exempt hospitals, such as long-term care hospitals, inpatient psychiatric facilities, inpatient rehabilitation facilities, children's hospitals, and cancer hospitals, are excluded from the definition of ''eligible hospital'' for purposes of the Medicare EHR Incentive Program and have not necessarily had an opportunity to demonstrate meaningful use. On the other hand, CAHs are eligible for incentive payments and subject to payment adjustments. Under the guidelines for assigning CCNs to Medicare providers, a CAH that changes status to an IPPS hospital will necessarily receive a new CCN. This is because several digits of the CCN encode the provider's status (for example, IPPS, CAH) under the Medicare program, However, we proposed to allow the CAH to register its meaningful use designation obtained under its previous CCN in order to avoid being subject to the hospital payment adjustment. It is worth noting that we adapted the proposed definition of ''new hospital'' for these purposes from similar rules that have been employed in the capital prospective payment system in § 412.300(b) of our regulations. We invited comment concerning the appropriateness of adapting these rules to the exception under the EHR program, and about whether modifications or other

revisions to these rules will be appropriate in the EHR context.

Comment: Several commenters recommended that the new hospitals exception for at least 1 full year cost reporting period be triggered not when the hospital accepts its first patient, but rather when it accepts its first Medicare covered patient. These commenters point out that there can be significant lapse between the time when a hospital accepts its first patient and the time when it accepts its first Medicare covered patient. Because the EHR payment adjustment applies to the Medicare payments, the commenters argued it is more appropriate to base the beginning of the new hospital exception on the admission of its first Medicare covered patient.

Response: We agree with the commenters and are revising the new hospital exception in this final rule to run for at least one full year cost reporting period after the hospital accepts its first Medicare-covered patient. This change renders our third criterion (a hospital that has been in operation for more than 2 years but has participated in the Medicare program for less than 2 years) for not considering a hospital new moot as the exception is now based on the admission of the first Medicare-covered patient, which we believe is sufficiently analogous to starting participation in the Medicare program to allow us to remove this criterion.

Comment: Some commenters argued that a hospital that undergoes a change of ownership and has a new CCN assigned due to the new owner's decision not to accept the assignment of the prior provider agreement should be allowed to register its meaningful use designation for the old CCN in the same manner a CAH that becomes an inpatient PPS hospital would.

Response: When a hospital has a new CCN assigned due to the new owner's decision not to accept the assignment of the prior provider agreement it is not considered a change of ownership. Rather the hospital is terminated from the Medicare program and then reapplies for a new CCN. We disagree with the commenters that the history of the old CCN should carry forward in this case. In cases where a new owner decides not to accept the previous provider agreement and a new CCN is assigned by CMS, the new owner is in effect, making a conscious decision to create a rupture with significant, and relevant, aspects of the hospital's history. Specifically, when a new owner acquires a Medicare participating hospital, CMS automatically assigns the provider agreement to the new owner. The new owner must then decide whether to accept or reject assignment of the existing agreement. If the new owner accepts assignment, the provider agreement remains intact and the owner retains all the benefits and liabilities of that agreement (as provided under 42 CFR 489.18 of the regulations). If the new owner rejects assignment, the owner has voluntarily terminated the previous provider agreement, the CCN of the hospital is terminated, and the owner is not responsible for Medicare liabilities (known or unknown), as well as eligibility for Medicare payment. Under these circumstances, where the new owner has made a conscious decision to terminate the previous provider agreement, we believe it is appropriate not to recognize the meaningful use designation obtained under that provider agreement and CCN. We have consistently reminded new owners of hospitals that they cannot obtain the benefits of a decision not to accept assignment of the provider agreement without accepting the burdens of the decision as well. Unlike the case of a CAH that becomes an inpatient PPS hospital, the assignment of a new CCN follows from a voluntary decision of the new owner not to retain the previous provider agreement and CCN.

We believe a similar result should apply in other cases where acquisitions and/or combinations of hospitals lead to the discontinuation of a CCN under which meaningful use had been demonstrated. For example, in some cases there is a combination of two or more certified hospitals under one agreement and one CCN. If the combined hospital has multiple locations, one location becomes the ''main location,'' and all other locations become remote and/or provider based. The hospital is considered ''one hospital'' by Medicare and must be truly integrated at all levels, including its system for maintaining medical records. Where the new owner rejects the assignment of the provider agreement for one or more of the facilities that are being combined into the integrated hospital, known and unknown Medicare liabilities of those facilities do not transfer to the new owner. Under these circumstances, for the same reasons discussed in the previous case, it is appropriate not to recognize the meaningful use designation that was obtained under the provider agreement(s) and CCN(s) that have not been retained under the integrated hospital.

Even where the new owners retain the acquired hospital's Medicare provider agreement, the acquired hospital's agreement is subsumed (although not terminated) into the single provider agreement of the combined hospital, and the acquired hospital's CCN is retired (again, not terminated). The new owners are responsible for all known and unknown Medicare liabilities of previous owners of the hospital, and there is no break in Medicare payments, as is the case where assignment of the prior provider agreement is rejected. However, as noted previously, in these cases, if the combined hospital has multiple locations, one location becomes the ''main location,'' and all other locations become remote and/or provider based. The hospital is considered ''one hospital'' by Medicare and must be truly integrated at all levels. In these cases it is most appropriate to recognize the prior meaningful use status of the surviving CCN of the main location for purposes of determining whether the payment penalty applies to the newly integrated hospital. In that way, the meaningful use determination will be based on the prior status of the major portion of the newly integrated hospital. Otherwise, the meaningful use designation of a relatively minor remote and/or provider-based hospital may become the basis for the designation of a much larger combined and integrated hospital. Therefore, we are finalizing our proposed policy, in cases of various ownership changes, acquisitions, and combinations of hospitals, to employ the meaningful use status of the surviving CCN to determine whether the payment adjustment applies.

Finally, we proposed an additional exception in this final rule for extreme circumstances that make it impossible for a hospital to demonstrate meaningful use requirements through no fault of its own during the reporting period. Such circumstances might include: A hospital closed; a natural disaster in which an EHR system is destroyed; EHR vendor going out of business; and similar circumstances. Because exceptions on extreme, uncontrollable circumstances must be evaluated on a case-by-case basis, we believe that it is appropriate to require hospitals to qualify for the exception through an application process.

Comment: Commenters stated universal support for this exception. However many commenters requested various circumstances be added to the list of example circumstances. This list is very similar, but not entirely identical to that for EPs. These examples dealt primarily with concerns related to vendors of CEHRT. Specifically, commenters were concerned about vendors of CEHRT not maintaining their

certification status, ability to meet implementation schedules, and ability to find a vendor of CEHRT willing to work with them. In addition, commenters suggested that the provider facing severe financial distress, such as bankruptcy or restructuring of debt should be included as an example.

Response: We used the same evaluation criteria we used for EPs and came to the same conclusion to add two examples to the list that was proposed: (1) A hospital whose CEHRT (complete or modular) loses its certification either through revocation or because the vendor did not upgrade their CEHRT to the latest requirements; and (2) a hospital suffering severe financial distress resulting in a bankruptcy or restructuring of debt.

We will require applications to be submitted no later than April 1 of the year before the payment adjustment year in order to provide sufficient time for a determination to be made and for the hospital to be notified about whether an exception has been granted prior to the payment adjustment year. This timeline for submission and consideration of hardship applications also allows for sufficient time to adjust our payment systems so that payment adjustments are not applied to hospitals who have received an exception for a specific payment adjustment year. As discussed earlier, in relation to EPs, in order for a hospital to apply for this exception, extreme circumstances would need to exist for the period in which the hospital would otherwise demonstrate meaningful use (that is, the EHR reporting period). We have modified our regulation to be clear that the circumstances must exist during the EHR reporting period (that is, 2 years prior to the payment adjustment year or, for hospitals that have never attested to meaningful use before, in the year immediately prior to the payment adjustment year).

Comment: Commenters suggested the following additional exceptions:

- Hospitals who make a good faith effort to purchase CEHRT, but could not find a vendor willing to work with them.
- Hospitals that determine they must switch EHR vendors to achieve meaningful use.
- Hospitals unable to meet meaningful use requirements because of failures on the part of EHR vendors.

Response: For the first suggested exception, we do not believe that hospitals that attempt to purchase CEHRT but cannot find a vendor would warrant an exception. The mere failure of an attempt to purchase CEHRT does not demonstrate that the hospital faces hardship significant enough to prevent it from becoming a meaningful EHR user. We also believe it would be problematic to define the parameters for determining that no vendor was willing to work with a hospital. Moreover, we already have provided for an exception for hospitals that face extreme circumstances beyond their control. Under this exception, eligible hospitals could attempt to show that their situation is extreme and out of the ordinary and that failure to obtain CEHRT was truly beyond their control. We are skeptical that such showings could be made when all the hospital has done is to make an attempt to purchase CEHRT. However, this exception provides hospitals with the opportunity to demonstrate that their failure of attempts to obtain CEHRT was due to circumstances beyond their control.

The next two exceptions may fall under the exception for extreme circumstances beyond the hospital's control, but the hospital would need to demonstrate that it meets this extreme exception. Any determination would be highly dependent on individual circumstances and evaluation of whether it is truly necessary to switch vendors, whether the switching vendors would prevent the hospital from reaching meaningful use, and whether the ''failures'' of the EHR vendor are both outside the norm of EHR implementation and beyond the control of the hospital.

Table 16 summarizes the timeline for hospitals to avoid the applicable payment adjustment by demonstrating meaningful use or qualifying for an exception from the application of the adjustment.

TABLE 16—TIMELINE FOR ELIGIBLE HOSPITALS TO AVOID PAYMENT ADJUSTMENT

Hospital payment adjustment year (fiscal year)	Demonstrate MU during EHR reporting period 2 years prior to year of payment adjustment	Or	For an eligible hospital demonstrating meaningful use for the first time in the year prior to the payment adjustment year use a continuous 90-day reporting period beginning no later than:	Or	Apply for an exception no later than:
2015	FY 2013 (with submission no later than November 30, 2013).		April 2, 2014 (with submission no later than July 1, 2014).		April 1, 2014.
2016	FY 2014 (with submission no later than November 30, 2014).		April 2, 2015 (with submission no later than July 1, 2015).		April 1, 2015.
2017	FY 2015 (with submission no later than November 30, 2015).		April 2, 2016 (with submission no later than July 1, 2016).		April 1, 2016.
2018	FY 2016 (with submission no later than November 30, 2016).		April 2, 2017 (with submission no later than July 1, 2017).		April 1, 2017.
2019	FY 2017 (with submission no later than November 30, 2017).		April 2, 2018 (with submission no later than July 1, 2014).		April 1, 2018.

Notes: (FY refers to the Federal fiscal year: October 1 to September 30. For example, FY 2015 is October 1, 2014 through September 30, 2015.)

The timelines for FY 2020 and subsequent fiscal years follow the same pattern.

TABLE 17—PERIOD HARDSHIP MUST BE SHOWN WITH APPLICATION DATE

Exception	Period of consideration for exception	Submit application for FY 2015 no later than
Insufficient Internet access	Demonstrate insufficient Internet access for any 90 days from the start of the FY 2 years prior to the payment adjustment year to April 1 of the year prior to the payment adjustment year (For FY 2015–October 1, 2012–April 1, 2014).	April 1, 2014.

TABLE 17—PERIOD HARDSHIP MUST BE SHOWN WITH APPLICATION DATE—Continued

Exception	Period of consideration for exception	Submit application for FY 2015 no later than
New hospital	New hospital granted an exception for one full cost reporting period after they admit their first Medicare patient.	Guidance to be issued following publication of the final rule.
Extreme Circumstances outside of the hospital's Control.	For a hospital that has previously demonstrated meaningful use, the hospital must demonstrate extreme circumstances that affect the FY 2 years prior to the payment adjustment year. (For FY 2015–FY 2013). For a hospital that has never demonstrated meaningful use, the hospital must demonstrate extreme circumstances that affect the FY prior to the payment adjustment year. (For FY 2015–FY 2014).	April 1, 2014.

d. Application of Market Basket Adjustment in FY 2015 and Subsequent FYs to a State Operating Under a Payment Waiver Provided by Section 1814(b)(3) of the Act

As discussed previously, the statute requires payment adjustments for eligible hospitals in states where hospitals are paid under section 1814(b)(3) of the Act. The statute also requires such adjustments to be designed to result in an aggregate reduction in payments equivalent to the aggregate reduction that would have occurred if payments had been reduced under section 1886(b)(3)(B)(ix)(I) of the Act. We proposed that an aggregate reduction in payments would mean the same dollar amount in reduced Medicare payments that that would have occurred if payments had been reduced to each eligible hospital in the state in a manner comparable to the reduction under § 412.64(d)(3).

To implement this provision, we proposed a new § 412.64(d)(5) that includes this statutory requirement and that required states operating under a payment waiver under section 1814(b)(3) of the Act to provide to the Secretary, no later than January 1, 2013, a report on the method that it proposes to employ in order to make the requisite payment adjustment.

We did not receive any comments on this proposal; and therefore, we are finalizing these provisions as proposed.

4. Reduction of Reasonable Cost Reimbursement in FY 2015 and Subsequent Years for CAHs That Are Not Meaningful EHR Users

Section 4102(b)(2) of the HITECH Act amends section 1814(l) of the Act to include an adjustment to a CAH's Medicare reimbursement for inpatient services if the CAH has not met the meaningful EHR user definition for an EHR reporting period. The adjustment will be made for a cost reporting period that begins in FY 2015, FY 2016, FY 2017, and each subsequent FY thereafter. Specifically, sections 1814(l)(4)(A) and (B) of the Act now provide that, if a CAH has not demonstrated meaningful use of CEHRT for an applicable reporting period, then for a cost reporting period that begins in FY 2015, its reimbursement will be reduced from 101 percent of its reasonable costs to 100.66 percent. For a cost reporting period beginning in FY 2016, its reimbursement will be reduced to 100.33 percent of its reasonable costs. For a cost reporting period beginning in FY 2017 and each subsequent FY, its reimbursement will be reduced to 100 percent of reasonable costs.

However, as provided for eligible hospitals, a CAH may, on a case-by-case basis, be granted an exception from this adjustment if CMS or its Medicare contractor determines, on an annual basis, that a significant hardship exists, such as in the case of a CAH in a rural area without sufficient Internet access. However, in no case may a CAH be granted an exception under this provision for more than 5 years.

a. Applicable Reduction of Reasonable Cost Payment Reduction in FY 2015 and Subsequent Years for CAHs That Are Not Meaningful EHR Users

In the Stage 1 final rule (75 FR 44564), we finalized the regulations regarding the CAH adjustment at § 495.106(e) and § 413.70(a)(6).

b. EHR Reporting Period for Determining Whether a CAH Is Subject to the Applicable Reduction of Reasonable Cost Payment in FY 2015 and Subsequent Years

For CAHs we proposed an EHR reporting period that is aligned with the payment adjustment year. For example, if a CAH is not a meaningful EHR user in FY 2015, then its Medicare reimbursement will be reduced to 100.66 percent for its cost reporting period that begins in FY 2015. This differs from what was proposed for eligible hospitals: an EHR reporting period prior to the payment adjustment year. We stated in the proposed rule that we believed the Medicare cost report process would allow us to make the CAH reduction for the cost reporting period that begins in the payment adjustment year, with minimal disruptions to the CAH's cash flow and minimal administrative burden on the Medicare contractors as discussed later.

CAHs are required to file an annual Medicare cost report that is typically for a consecutive 12-month period. The cost report reflects the inpatient statistical and financial data that forms the basis of the CAH's Medicare reimbursement. Interim Medicare payments may be made to the CAH during the cost reporting period based on the previous year's data. Cost reports are filed with the CAH's Medicare contractor after the close of the cost reporting period and the data on the cost report are subject to reconciliation and a settlement process prior to a final Medicare payment being made.

We proposed to amend the definition of the EHR reporting period that will apply for purposes of payment adjustments under § 495.4. For CAHs this will be the full Federal fiscal year that is the same as the payment adjustment year (unless a CAH is in its first year of demonstrating meaningful use, in which case a continuous 90-day reporting period within the payment adjustment year will apply). The adjustment would then apply based upon the cost reporting period that begins in the payment adjustment year (that is, FY 2015 and thereafter). Thus, if a CAH is not a meaningful user for FY 2015, and thereafter, then the adjustment would be applied to the CAH's reasonable costs incurred in a cost reporting period that begins in that affected FY as described in § 413.70(a)(6)(i).

We proposed to require CAHs to submit their attestations on meaningful use by November 30th of the following FY. For example, if a CAH is attesting that it was a meaningful EHR user for FY 2015, the attestation must be submitted no later than November 30, 2015. Such an attestation (or lack

thereof) will then affect interim payments to the CAH made after December 1st of the applicable FY. If the cost reporting period ends prior to December 1st of the applicable FY then any applicable payment adjustment will be made through the cost report settlement process.

All comments received on this provision were in support. We thank commenters for their support and finalize as proposed for the reasons outlined in the proposed rule.

c. Exception to the Application of Reasonable Cost Payment Reductions to CAHs in FY 2015 and Subsequent FYs

As discussed previously, CAHs may receive exceptions from the payment adjustments for significant hardship. While our current regulations, in § 413.70(a)(6)(ii) and (iii) contain this hardship provision we proposed revising these regulations to align them with the exceptions being proposed for EPs and subsection (d) hospitals. As with EPs and subsection (d) hospitals we proposed that CAHs could apply for an exception on the basis of lack of sufficient Internet connectivity. Applications will be required to demonstrate insufficient Internet connectivity to comply with the meaningful use objectives requiring internet connectivity (that is, summary of care documents, electronic prescribing, making health information available online, and submission of public health information) and insurmountable barriers to obtaining such internet connectivity. As CAHs will have an EHR reporting period aligned with the payment adjustment year, we proposed that the insufficient Internet connectivity will need to be demonstrated for each applicable payment adjustment year. For example, as proposed, to avoid a payment adjustment for cost reporting periods that begin during FY 2015, the hardship would need to be demonstrated for FY 2015. For each year subsequent to FY 2015, the basis for an exception would continue to be for the hardship in the FY in which the affected cost reporting period begins. As stated in § 413.70(a)(6)(iii), any exception granted may not exceed 5 years. After 5 years, the exception will expire and the appropriate adjustment will apply if the CAH has not become a meaningful EHR user for the appropriate EHR reporting period.

Comment: Commenters have suggested that it is inappropriate to base the Internet connectivity exception on the same year that a CAH is expected to demonstrate meaningful use. They assert that it is impractical for a CAH to achieve sufficient internet connectivity and meet meaningful use all in 1 year. A few commenters recommended a 2-year prospective exception for Internet connectivity as used for the EPs and inpatient PPS hospitals.

Response: We agree with commenters that established sufficient Internet connectivity and meaningful use in the same year is not feasible. However, since the payment adjustment year is aligned with the CAH's EHR period, we believe that using a 2-year lookback period similar to EPs and eligible hospitals is inappropriate for CAHs. Therefore, we will base the insufficient internet access exception on the cost reporting period that begins prior to or during the payment adjustment year. For FY 2015, the CAH must submit the application by November 30, 2015, but eligibility for this exception would be based on the information for any 90-day period within the cost reporting period that begins prior to or during the payment adjustment year.

After consideration of the comments, we are revising this exception to base it on any 90-day period within the cost reporting period that begins prior to or during the payment adjustment year.

As with new EPs and new eligible hospitals, we proposed an exception for a new CAH for a limited period of time after it has begun services. We proposed to allow an exception for 1 year after they accept their first patient. For example, a CAH that is established in FY 2015 would be exempt from the penalty through its cost reporting period ending at least 1 year after the CAH accepts its first patient. If the CAH is established March 15, 2015 and its first cost reporting period is less than 12 months (for example, from March 15 through June 30, 2015), the exception would exist for both the short cost reporting period and the following 12-month cost reporting period lasting from July 1, 2015 through June 30, 2016. However, the new CAH would be required to submit its attestation that it was a meaningful EHR user for FY 2016 no later than November 30, 2016, in order to avoid being subject to the payment adjustment for the cost reporting period that begins in FY 2016 (in the previous example from July 1, 2016 through June 30, 2017).

We stated in the proposed rule that in proposing such an exception for newly established CAHs, it is important to ensure that the exception is not available to CAHs that have already been in operation in one form or another, perhaps under a different ownership or merely in a different location, and thus have in fact had an opportunity to demonstrate meaningful use of EHR technology. Therefore, we proposed that for the purposes of qualifying for this exception, a new CAH means a CAH that has operated (under previous or present ownership) for less than 1 year.

We stated in the proposed rule that in some cases an eligible hospital may convert to a CAH. An eligible hospital is a subsection (d) hospital that is a meaningful user and is paid under the inpatient hospital prospective payment systems as described in subpart A of Part 412 of the regulations. In these cases, eligible hospitals were able to qualify for purposes of the EHR hospital incentive payments by establishing meaningful use, and (as discussed previously) are also subject to a payment adjustment provision in FY 2015 and subsequent years if they fail to demonstrate meaningful use of EHR technology during an applicable reporting period. Therefore, we proposed not to treat a CAH that has converted from an eligible hospital as a newly established CAH for the purposes of this exception.

On the other hand, we stated in the proposed rule that other types of hospitals such as long-term care hospitals, psychiatric hospitals, and inpatient rehabilitation facilities are not subsection (d) hospitals. These other types of hospitals do not meet the definition of an ''eligible hospital'' for purposes of the Medicare EHR hospital incentive payments and the application of the proposed hospital market basket adjustment in FY 2015 and subsequent years under section 1886(n)(6)(B) of the Act. In some instances, a CAH may be converted from one of these types of hospitals. In that case, the CAH would not have had an opportunity to demonstrate meaningful use, and it is therefore appropriate to treat them as newly established CAHs if they convert from one of these other types of hospitals to a CAH for purposes of determining whether they should qualify for an exception from the application of the adjustment in FY 2015 and subsequent years. Thus, we proposed to consider a CAH that converts from one of these other types of hospitals to be a newly established CAH for the purposes of qualifying for this proposed exception from the application of the adjustment in FY 2015 and subsequent years.

In summary, we proposed for purposes of qualifying for the exception to revise § 413.70(a)(6)(ii) to state that a newly established CAH means a CAH that has operated (under previous or present ownership) for less than 1 year. We also proposed to revise § 413.70(a)(6)(ii) to state that the

following CAHs are not newly established CAHs for purposes of this exception:

- A CAH that builds new or replacement facilities at the same or another location even if coincidental with a change of ownership, a change in management, or a lease arrangement.
- A CAH that closes and subsequently reopens.
- A CAH that has been in operation for more than 1 year but has participated in the Medicare program for less than 1 year.
- A CAH that has been converted from an eligible subsection (d) hospital.

Comment: Identical to the concerns raised for subsection (d) hospitals, several comments stated that the new CAH exception for at least 1 full year cost reporting period be triggered not by when the hospital accepts its first patient, but rather when it accepts its first Medicare-covered patient.

Response: We agree with the commenters and revise the exception for new CAHs to be for at least 1 full year cost reporting period after they accept their first Medicare-covered patient. This change renders our third criteria (a CAH that has been in operation for more than 2 years but has participated in the Medicare program for less than 2 years) for not considering a CAH new moot as the exception is now based on the admission of the first Medicare-covered patient, which we believe is sufficiently analogous to starting participation in the Medicare program to allow us to remove this criteria.

After consideration of comments, we are revising this exception to base it on the point when the CAH accepts their first Medicare patient.

Finally, we proposed an additional exception in this final rule for extreme circumstances that make it impossible for a CAH to demonstrate meaningful use requirements through no fault of its own during the reporting period. Such circumstances might include: A CAH is closed; a natural disaster in which an EHR system is destroyed; EHR vendor going out of business; and similar circumstances. Because exceptions on extreme, uncontrollable circumstances must be evaluated on a case-by-case basis, we believe that it is appropriate to require CAHs to qualify for the exception through an application process.

Comment: Commenters supported this exception in principle. However, many commenters requested various circumstances be added to the list of example circumstances. This list is nearly entirely identical to that for EPs and subsection (d) hospitals as described earlier.

Response: We used the same evaluation criteria we used for EPs and came to the same conclusion to add two examples. First, a CAH whose CEHRT (complete or modular) loses its certification either through revocation or because the vendor did not upgrade their CEHRT to the latest requirements; and second, a CAH suffering severe financial distress resulting in a bankruptcy or restructuring of debt

As described previously, we are finalizing the policy to align a CAH's payment adjustment year with the applicable EHR reporting period. A CAH must submit their meaningful use attestation for a specific EHR reporting period no later than 60 days after the close of the EHR reporting period (no later than November 30th of the year) otherwise the payment penalty could be applied to the CAH's cost reporting period that begins in that payment adjustment year. We proposed to require a CAH to submit an application for an exception, as described previously, to its Medicare contractor by the same November 30th date that the meaningful use attestation is due. Therefore, we proposed that a CAH will be subject to the payment adjustment if it has not submitted its meaningful use attestation (or its attestation has been denied) and has not submitted an application for an exception by November 30th of the subsequent EHR reporting period. If a CAH's request for an exception is not granted by the Medicare contractor then we proposed that the payment adjustment will be applied. We stated in the proposed rule that if a CAH anticipates submitting an exception application we recommend that the CAH communicate with its Medicare contractor to determine the necessary supporting documentation to submit by the November 30th due date.

After consideration of public comments, we are finalizing these application deadlines exception as proposed.

Table 18, summarizes the timeline for CAHs to avoid the applicable payment adjustment by demonstrating meaningful use or qualifying for an exception from the application of the adjustment.

Comment: Commenters provided the same suggestions for additional exceptions for CAHs that they did for eligible hospitals.

Response: As we stated in our response to similar comments submitted for eligible hospitals these additional exceptions could have been suggested as examples for the exception for extreme circumstances. We encourage hospitals in these situations to utilize the extreme circumstances exception. We believe these exceptions are too subjective to be finalized as new exceptions as suggested by commenters.

TABLE 18—TIMELINE FOR CAHS TO AVOID PAYMENT ADJUSTMENT

CAH with cost reporting period beginning during payment adjustment year	Demonstrate MU for EHR reporting period	Or	For a CAH demonstrating MU for the first time, a continuous 90-day reporting period ending no later than	Or	Apply for an exception no later than
FY 2015	FY 2015 (with submission no later than November 30, 2015).		September 30, 2015 (with submission no later than November 30, 2015).		November 30, 2015.
FY 2016	FY 2016 (with submission no later than November 30, 2016).		September 30, 2016 (with submission no later than November 30, 2016).		November 30, 2016.
FY 2017	FY 2017 (with submission no later than November 30, 2017).		September 30, 2017 (with submission no later than November 30, 2017).		November 30, 2017.
FY 2018	FY 2018 (with submission no later than November 30, 2018).		September 30, 2018 (with submission no later than November 30, 2018).		November 30, 2018.
FY 2019	FY 2019 (with submission no later than November 30, 2019).		September 30, 2019 (with submission no later than November 30, 2019).		November 30, 2019.

Notes: (FY refers to the Federal fiscal year October 1 to September 30. For example, FY 2015 is October 1, 2014 to September 30, 2015.) The timelines for FY 2020 and subsequent fiscal years follow the same pattern.

TABLE 19—PERIOD HARDSHIP MUST BE SHOWN WITH APPLICATION DATE FOR CAHS

Exception	Period of consideration for exception	Submit application for FY 2015 no later than
Insufficient Internet access—CAHs	Demonstrate insufficient internet access for any 90 day period within the cost reporting period that begins prior to or during the payment adjustment year.	Nov 30, 2015.
New CAHI	New CAH granted an exception for one full cost reporting period after they admit their first Medicare patient.	Guidance to be issued following publication of the final rule.
Extreme Circumstances outside of the CAH's Control.	Oct 1 through Sept 30 of the payment adjustment year	Nov 30, 2015.

5. Administrative Review Process of Certain Electronic Health Record Incentive Program Determinations

In the Stage 2 proposed rule we proposed an administrative appeals process would apply to both Stage 1 and Stage 2 of meaningful use. We also posted guidance on the CMS Web site, *http://www.cms.gov/qualitymeasures/05_ehrincentiveprogramappeals.asp*, in the interim between the publication of this proposed rule and the publication of the final rule. We sought public comments both on the guidance and the proposed rule.

We proposed to limit permissible appeals to the following three types of appeals:

- Eligibility Appeals
- Meaningful Use Appeals
- Incentive Payment Appeals

We also proposed certain filing and other deadlines for such administrative appeals. We refer readers to our proposed rule at (77 FR 13779 through 13780) for a full explanation of these proposals.

We received several comments on our appeals proposals, which are discussed in this section of the preamble. However, after review of the public comments and the appeals filed as of the writing of this final rule, we believe the administrative review process is primarily procedural and does not need to be specified in regulation. The appeals process we proposed essentially constituted an agency reconsideration of certain types of determinations regarding eligibility for the program, meaningful use, or incentive payment amounts. We believe such an informal reconsideration process may be included in procedural guidance, rather than in our regulations. Therefore, our administrative appeals process will be included on our Web site at *www.cms.gov/EHRIncentivePrograms*.

We recognize that there is a procedural appeals process currently in effect, and in all cases, we will require that requests for appeals, all filings, and all supporting documentation and data be submitted through a mechanism and in a manner specified by us. We expect all providers to exhaust this administrative review process prior to seeking review in Federal Court.

As we stated in the proposed rule, we also note that the HITECH Act prohibits both administrative and judicial review of the standards and method used to determine eligibility and payment (including those governing meaningful use) (see 42 CFR 413.70(a)(7), 495.106(f), 495.110, 495.212). Our limited appeal process would not provide administrative review of these areas; but rather would involve cases of individual applicability; that is, where a provider is challenging not the standards and methods themselves, but whether the provider met the regulatory standards and methods promulgated by CMS in its rules.

While we are not finalizing regulations on appeals, we respond to comments we received on our proposals.

Comment: Several commenters requested CMS make more explicit information available to providers on the documentation that should be available in the event of an audit.

Response: In the event of an audit, at a minimum, providers should have available electronic or paper documentation that supports providers' completion of the Attestation Module responses, including the specific information that supports each measure. In addition, providers should have documentation to support the submission of CQMs, including the specific information that supports each measure. Providers should also maintain documentation to support their incentive payment calculations, for example data to support amounts included on their cost report, which are used in the calculation. As indicated in the Stage 1 final rule, providers should keep documentation for at least 6 years following the date of attestation.

Comment: A commenter noted that states may need to change their audit procedures or State Medicaid Health Information Technology (HIT) Plans (SMHPs) regarding audit and appeals by CMS for demonstrating meaningful use.

Response: We proposed that states would have an option to have CMS audit and conduct appeals of eligible hospitals' meaningful use. We finalize that proposal in our Medicaid regulations at § 495.332. We agree that SMHPs regarding audit and appeals may need revising. We are working closely with states to align principles regarding both audit and appeals process for both the Medicare and Medicaid EHR Incentive Programs. We intend to give states both technical support and program information to ensure consistency in the application of those audit and appeals principles.

Comment: A number of commenters asked for the addition of appeal categories beyond those we proposed. Several commenters requested CMS implement an appeals process for penalties and hardship exemptions. One commenter requested more comprehensive language to better define the requirements and circumstances under which appeals may be heard and acted upon. Another commenter requested CMS institute an appeals process relating to MACs' decisions regarding reasonable costs and determining incentive payments for CAHs.

Response: We appreciate the number of commenters that requested additional appeal categories. Since the writing and publication of the Stage 1 final rule, we have had the opportunity to review a number of appeals, and we note that many of these appeals do not necessarily fit easily into the categories we proposed. Based on the comments we received and the information we have regarding appeals that have already been filed, we are concerned that finalizing the categories we proposed for appeals could negatively impact providers and potentially add unnecessary burden and complexity. We are also concerned that specifying these categories could limit the flexibility we might otherwise have in addressing new or unanticipated appeal categories in the future, or in adding greater detail regarding the scope and requirements of particular types of

appeals. For example, a number of the appeals we have received are related neither to eligibility, meaningful use, or incentive payments directly, but instead address registration or attestation system changes that we are currently in the process of implementing for providers' benefit. Because of these concerns, we decline to finalize the categories of appeals as proposed and intend to issue guidance regarding types or categories of appeals and accompanying requirements on our Web site at *www.cms.gov/EHRIncentivePrograms*.

As stated earlier, the HITECH Act prohibits both administrative and judicial review of the standards and methods used to determine eligibility and payment (including those governing meaningful use) (see 42 CFR 413.70(a)(7), 495.106(f), 495.110, 495.212). Any procedures would not allow administrative appeals of these issues. As for reasonable costs reported by CAHs, we already stated in the Stage 1 final rule that a CAH ''may appeal the statistical and financial amounts from the Medicare cost report used to determine the CAH incentive payment,'' but that the CAH ''would utilize the current provider appeal process pursuant to section 1878 of the Act.'' (75 FR 44464)

Finally, we note that there will not be appeal reconsiderations of hardship exception or payment adjustment determinations. As specified in section II.D.2.c. of this final rule, the granting of a hardship exception will be through an application process, and we expect providers to make a full declaration of all relevant information at the time of filing of that application. We are concerned that there would not be adequate time to process hardship exception applications, render determinations, and also process appeals of those redeterminations. Therefore, we decline to allow appeal reconsiderations of hardship exception determinations. We note that the HITECH Act prohibits both administrative and judicial review of the standards and methods used to determine payment adjustments, including hardship exceptions to those payment adjustments.

Comment: A number of commenters noted concerns regarding the timelines proposed for filing appeals and forwarding documentation.

Response: We appreciate the many comments regarding the proposed timelines for appeals. However, we are not finalizing our appeal regulations in this final rule. We intend to issue guidance regarding timelines for types or categories of appeals on our Web site at *www.cms.gov/EHRIncentivePrograms*.

E. Medicare Advantage Organization Incentive Payments

1. Definitions (§ 495.200)

We proposed to add definitions of the terms ''Adverse eligibility determination,'' ''Adverse payment determination'' and ''MA payment adjustment year.'' We also proposed to add a definition for the term ''Potentially qualifying MA–EPs and potentially qualifying MA-affiliated eligible hospitals,'' to cross reference the existing definition at § 495.202(a)(4).

We proposed to clarify the application of ''hospital-based EP'' as that term is used in paragraph 5 of the definition of ''qualifying MA–EP'' in § 495.200, to make clear that the calculation is not based on FFS-covered professional services, but rather on MA plan enrollees. Otherwise, qualifying MA–EPs who provide at least 80 percent of their covered professional services to MA plan enrollees of a qualifying MA organization might be considered ''hospital based'' solely on the basis of 90 percent of their FFS-covered professional services being provided in a hospital setting. We provided an example of a qualifying MA–EP that might bill FFS 10 times over a year for emergency room services provided to various Medicare patients. Although the vast majority of the MA–EP's covered services were reimbursed under his or her arrangement with a qualifying MA organization, 100 percent (or 10) of the MA–EP's FFS-covered services would have been for hospital-based services, which would prohibit the MA organization from receiving reimbursement under the MA EHR incentive program for the MA–EP. We do not believe that we should exclude MA–EPs from the MA EHR Incentive Program due to only a few FFS claims. Therefore, we are clarifying the definition of ''qualifying MA–EP'' to state that for purposes of the MA EHR Incentive Program, a hospital-based MA–EP provides 90 percent or more of his or her covered professional services in a hospital setting to MA plan enrollees of the qualifying MA organization.

We did not receive any comments on these provisions and we are finalizing them as proposed with the exception of the definitions of the terms ''Adverse eligibility determination,'' and ''Adverse payment determination.'' As we explain later in this preamble discussion, we do not believe formal regulations for an informal reconsideration procedural rule are necessary and therefore, we are not finalizing these two definitions in our regulations.

2. Identification of Qualifying MA Organizations, MA–EPs, and MA-Affiliated Eligible Hospitals (§ 495.202)

We proposed a technical change to § 495.202(b)(1) to require that the qualifying MA organization identify those MA–EPs and MA-affiliated eligible hospitals that the qualifying MA organization believes would be meaningful users of CEHRT during the reporting period, when a qualifying MA organization intends to claim an incentive payment for a given qualifying MA–EP or MA-affiliated eligible hospital.

We also proposed an amendment to § 495.202(b)(2) to reflect current policy that qualifying MA organizations must report the CMS Certification Number (CCN) for qualifying MA-affiliated eligible hospitals. We explained that as the program matures, it is necessary to report this detail to effectively administer the program. We are adopting this change in this final rule (§ 495.202(b)(2)).

We proposed a new § 495.202(b)(3) to establish a reporting requirement to identify qualifying MA–EPs who have furnished more than 50 percent of their covered Medicare professional services to MA enrollees of the qualifying MA organization in a designated geographic Health Professional Shortage Area (HPSA) during the reporting period. We also proposed to redesignate the current § 495.202(b)(3) as (b)(4), and revised the introductory language in (b)(2) to reflect this redesignation.

We also proposed to require MA organizations to identify qualifying MA–EPs or MA-affiliated eligible hospitals within 2 months of the close of the payment year (rather than within 60 days) (previously § 495.202(b)(3), now newly redesignated § 495.202(b)(4)). We explained that this change would be consistent with the Medicare FFS EHR Incentive Program, but in nonleap years this would reduce the time for reporting revenue amounts to CMS for qualifying MA–EPs from 60 days to 59 days. We proposed conforming amendments to § 495.204(b)(2) and § 495.210(b) and (c).

We also explained that because the redesignated § 495.202(b)(4) relates to both the payment phase and the payment adjustment phase of the program, we are adding the word ''qualifying'' to the text of the regulation. Therefore, we explained, this regulation applies to both qualifying MA–EPs and MA-affiliated eligible hospitals (both payment and payment adjustment phases of the program) and

potentially qualifying MA–EPs and MA-affiliated eligible hospitals (only the payment adjustment phase of the program).

We proposed to redesignate the current § 495.202(b)(4) as § 495.202(b)(5), and to require a qualifying MA organization to identify the MA–EPs and MA-affiliated eligible hospitals that it believes would be both ''qualifying'' and ''potentially qualifying.'' To calculate the payment adjustment, we explained that we will need to know how many qualifying MA–EPs and MA-affiliated eligible hospitals are, and are not, meaningful users. We also proposed to correct a cross-reference.

We did not receive any comments on these provisions and we are finalizing them as proposed.

3. Incentive Payments to Qualifying MA Organizations for Qualifying MA–EPs and Qualifying MA-Affiliated Eligible Hospitals (§ 495.204)

a. Amount Payable to a Qualifying MA Organization for Its Qualifying MA–EPs

In § 495.204(b), we proposed to clarify that methods relating to overhead costs may be submitted for MA–EPs regardless of whether the MA–EPs are salaried or paid in another fashion, such as on a capitated basis.

As stated previously, we also proposed to require MA organizations, to submit revenue amounts relating to their qualifying MA–EPs within 2 months of the close of the payment year, (rather than within 60 days).

b. Increase in Incentive Payment for MA–EPs Who Predominantly Furnish Services in a Geographic Health Professional Shortage Area (HPSA)

In a new § 495.204(e) (we proposed to redesignate the current paragraph (e) as paragraph (f)), we proposed to add a provision clarifying the currently existing policy governing whether a qualifying MA organization is entitled to a HPSA increase for a given qualifying MA–EP. We explained that section 1848(o)(1)(B)(iv) of the Act, which is currently in effect, and as applied to the MA program, provides a 10-percent increase in the maximum incentive payment available for MA–EPs that predominantly furnish covered professional services during the MA EHR payment year in a geographic HPSA. We explained that consistent with the Medicare FFS EHR Incentive Program, we interpreted the term ''predominantly'' to mean more than 50 percent. For the MA EHR Incentive Program, we proposed to determine eligibility for the geographic HPSA increase on whether the qualifying MA–EP predominantly provided services to MA plan enrollees of the qualifying MA organization in a HPSA during the applicable MA EHR payment year.

Further, we explained that it is worth noting that an MA organization does not automatically receive a HPSA bonus merely because its qualifying MA–EPs predominantly served a geographic HPSA. We stated that in order for the MA organization to receive the 10 percent increase, the MA–EP needs to provide at least 10 percent or more of Medicare Part B covered professional services to MA plan enrollees of the qualifying MA organization. In other words, to qualify for the HPSA bonus an MA–EP needs to provide more than $24,000 of Medicare Part B covered professional services to MA plan enrollees of the qualifying MA organization. The MA–EP needs to provide up to $26,400 in covered services to earn the maximum HPSA-enhanced bonus of $19,800 if the first payment year is 2011 or 2012. Thus, for MA–EPs who predominantly furnish services in a geographic HPSA, the ''incentive payment limit'' in § 495.102(b) would be $19,800, instead of $18,000, if the first MA EHR payment year for the MA organization with respect to the MA–EP is 2011 or 2012. If an MA organization could show that an MA–EP predominantly served beneficiaries in a HPSA during the payment year and that that MA–EP provided, for example, for the 2011 payment year, at least $26,400 in Part B professional services to MA plan enrollees of the MA organization during the payment year, we stated that the MA organization could receive the entire $19,800 incentive payment for that MA–EP. If the MA–EP provided less than $26,400 in Part B professional services, the potential incentive payment for that MA–EP for that MA organization would be less than $19,800 for the payment year. We proposed a conforming amendment in § 495.202(b)(2)(ii) to require MA organizations to notify CMS whether the qualifying MA–EP predominantly provided covered services to MA plan enrollees in a HPSA.

We added a new paragraph (5) to redesignated paragraph (f). This new paragraph (5) clarifies that we would recoup the EHR incentive payment if one of the following entities fails to comply with an audit request to produce documents or data needed to audit the validity of an EHR incentive payment:—(1) A qualifying MA–EP, (2) an entity that employs a qualifying MA–EP (or in which a qualifying MA–EP had a partnership interest), (3) an MA-affiliated eligible hospital, or (4) any other party contracting with the qualifying MA organization. We explained that we already have the authority to do this under the current § 495.204(e)(4), (to be redesignated as (f)(4)); however, we proposed to amend the regulations to specifically address what would happen in the case of a failure to produce documents or data related to an audit request.

We added a new paragraph (g) to § 495.204 to clarify the current policy that in the unlikely event we paid a qualifying MA organization for a qualifying MA–EP, and it was later determined that the MA–EP—(1) was entitled to a full incentive payment under the Medicare FFS EHR Incentive Program; or (2) had received payment under the Medicaid EHR Incentive Program, we would recover the funds paid to the qualifying MA organization for such an MA–EP from the MA organization. (We stated that the former case would be in the unlikely event an MA–EP appeared to have earned an EHR incentive of less than the full amount under FFS, and then later was determined to have earned the full amount under FFS. In accordance with duplicate payment avoidance provisions in section 1853(l)(3)(B) of the Act and implementing regulations at § 495.208, we would recover the MA EHR incentive payment since a full FFS EHR payment was due.) If the organization still had an MA contract, we would recoup the amount from the MA organization's monthly payment under section 1853(a)(1)(A) of the Act. If the organization no longer had an MA contract, we would recoup any amounts through other means, such as formal collection. We stated that since duplicate and overpayments are prohibited by statute (sections 1853(l)(3)(B), 1853(m)(3)(B), and 1903(t)(2) of the Act), we believe that this policy must apply to all years of the program, beginning with payment year 2011. Thus, we would recover overpaid MA EHR incentive payments for all MA EHR payment years, including payment year 2011.

We also clarified that, in accordance with statutory requirements, if it is determined that an MA organization received an incentive payment for an MA-affiliated eligible hospital that also received a payment under the Medicare FFS EHR Incentive program or that otherwise should not have received such payment, we would similarly recover the funds paid to the qualifying MA organization for such MA-affiliated eligible hospital from either the MA organization's monthly payment under section 1853(a)(1)(A) of the Act, from

the MA-affiliated eligible hospital's CMS payment through the typical process for recouping Medicare funds from a ''subsection (d)'' hospital, or through other means such as a collection process, as necessary. As with EPs, as the statute prohibits us from making duplicate and overpayments, we explained that this policy does not constitute a new rule and must apply to all years of the program, beginning with payment year 2011.

We did not receive any comments on these provisions and are finalizing them as proposed.

4. Avoiding Duplicate Payments

We stated that qualifying MA–EPs are eligible for the Medicare FFS EHR incentive payment if they meet certain requirements under that program. However, we also stated that an EHR incentive payment is only allowed from one program. We believe that the requirement that MA organizations notify MA–EPs that the MA organization intended to claim them for the MA EHR Incentive Program would minimize misunderstandings among MA–EPs (particularly if they expected to receive an incentive payment under the Medicare FFS Incentive Program). We stated that it was important for MA–EPs to understand certain aspects of the program such as when a qualifying MA organization claimed an MA–EP under the MA EHR Incentive Program and the MA–EP was not entitled to a full FFS EHR Incentive payment, the MA organization claim would prevent a partial payment under the Medicare FFS EHR Incentive Program from being paid directly to the MA–EP.

We proposed to require each qualifying MA organization to attest that it notified the MA–EPs it intends to claim. We proposed to require that this attestation be submitted along with the MA organization's meaningful use attestation for the MA EHR payment year for which the MA organization is seeking payment.

Therefore, we proposed to revise § 495.208 by adding—(1) a new paragraph (a) that requires a qualifying MA organization to notify MA–EPs when the MA organization intends to claim them for the MA EHR Incentive Program prior to making its attestation of meaningful use to CMS; (2) a new paragraph (b) that requires a qualifying MA organization to notify MA–EPs when it is claiming them, that the MA–EPs may still receive an incentive payment under the Medicare FFS or Medicaid EHR Incentive Program, if certain requirements are met; and (3) a new paragraph (c) that requires a qualifying MA organization to attest to CMS that these notification requirements have been satisfied by the MA organization. We also proposed to redesignate the current paragraphs (a) through (c) of § 495.208 as (d) through (f), respectively.

As discussed previously, in § 495.210, we proposed to change the requirement that MA organizations attest to meaningful use within 60 days after the close of the MA EHR payment year for both MA–EPs and MA-affiliated eligible hospitals, to a requirement to do so within 2 months in order to provide consistency between the Medicare FFS and MA EHR Incentive Programs.

Comment: A commenter requested that CMS confirm that MA organization reporting to CMS under HEDIS, HOS, and CAHPS will continue to apply for purposes of the MA EHR Incentive Payment Program during Stage 2. The commenter questioned if MA organizations, for both qualifying MA–EPs and MA-affiliated eligible hospitals, will be permitted to continue to submit HEDIS, HOS, and CAHPS data in lieu of CQMs during Stage 2.

Response: We are confirming that during Stage 2 and subsequent stages of MA EHR Program implementation, we will continue to require qualifying MA organizations to successfully report HEDIS, HOS, and CAHPS measures in lieu of CQMs for purposes of meaningful use reporting for qualifying MA–EPs and MA-affiliated eligible hospitals.

After review of the public comments received, we are finalizing these provisions as proposed.

5. Payment Adjustments Effective for 2015 and Subsequent MA Payment Adjustment Years (§ 495.211)

In the proposed rule we explained that beginning in 2015, the law provides for adjustments to monthly MA payments under sections 1853(l)(4) and 1853(m)(4) of the Act if a qualifying MA organization's potentially qualifying MA–EPs or MA-affiliated eligible hospitals (or both) are not meaningful users of certified EHR technology. We proposed to add a definition of ''MA Payment Adjustment Year'' to the definitions in § 495.200. The definition was needed in part because the payment adjustment phase of the MA EHR program continued indefinitely—beyond the last year for which MA EHR incentive payments could be made to qualifying MA organizations. Additionally, since we proposed to operationalize MA EHR payment adjustments in a different manner than under the FFS Medicare program, we believed a definition was warranted.

We proposed that an MA organization would have to had at least initiated participation in the incentive payment phase of the program from 2011 through 2014 for MA–EPs or through 2015 for MA-affiliated eligible hospitals, to have its Part C payment under section 1853(a)(1)(A) of the Act adjusted during the payment adjustment phase of the program, and would have to continue to qualify for participation in the program as a ''qualifying MA organization'' as defined for purposes of this program. The imposition of a payment adjustment is also conditioned on the qualifying MA organization having potentially qualifying MA–EPs and MA-affiliated eligible hospitals for the respective payment adjustment years. We took this approach because we believed that it would be impossible to verify that a given MA organization is, in fact, a qualifying MA organization with potentially qualifying MA–EPs and MA-affiliated eligible hospitals, unless the MA organization had first demonstrated that it met these requirements through receipt of MA EHR incentive payments for at least one of the MA EHR payment years as defined for purposes of this program. We noted that although MA EHR payment years for both MA–EPs and MA-affiliated eligible hospitals could theoretically continue through 2016, the last first MA EHR payment year for which an MA organization could receive an EHR incentive payment is 2014 for MA–EPs, and 2015 for MA-affiliated hospitals.

Furthermore, we believe that payment adjustments under section 1853 of the Act would have limited applicability in the MA EHR Incentive Program because the HITECH Act limited the type of organization that would qualify as a ''qualifying MA organization'' for purposes of the MA EHR Incentive Program in both phases of the program (the phase of the program during which we make incentive payments, and the phase of the program when we adjust payments under sections 1853(l)(4) and 1853(m)(4) of the Act). We stated that section 1853(l)(5) of the Act limits which MA organizations may participate by defining the term ''qualifying MA organization.'' We explained that a ''qualifying MA organization'' must be organized as a health maintenance organization (HMO), as defined in section 2791(b)(3) of the Public Health Service (PHS) Act (42 U.S.C. 1395w–23(l)(5)). The PHS Act further defines an HMO as a ''federally qualified HMO, an organization recognized under state law as an HMO, or a similar organization regulated under state law for solvency in the same

manner and to the same extent as such an HMO.'' (See 42 U.S.C. 300gg–91). We explained that an MA organization participating in Medicare Part C might not be a federally qualified HMO, nor an organization recognized under state law as an HMO, nor a similar organization regulated under state law for solvency in the same manner and to the same extent as such an HMO. We noted that organizations that do not meet the PHS definition of ''HMO'' may not receive an incentive payment, nor would they be eligible to have their Part C payment adjusted for having potentially qualifying MA–EPs or MA-affiliated eligible hospitals that do not successfully demonstrate meaningful use of certified EHR technology.

Secondly, section 1853(l)(2) of the Act requires that MA–EPs be as described in that paragraph. We stated that the vast majority of MA organizations do not employ their physicians; nor do they use physicians who work for, or who are partners of, an entity that contracts nearly exclusively with the MA organization (as set out in the definition of a ''Qualifying MA–EP'' in § 495.200).

Thirdly, section 1853(m)(2) of the Act requires that a qualifying MA organization have common corporate governance with a hospital in order for it to be considered an MA-affiliated eligible hospital, and we did not expect many qualifying MA organizations to meet this test.

We explained that the current § 495.202(b)(4) (which we proposed to redesignate as § 495.202(b)(5)) requires all qualifying MA organizations that have potentially qualifying MA–EPs or MA-affiliated eligible hospitals that are not meaningful users to initially report that fact to us beginning in June of MA plan year 2015. We proposed that this reporting requirement would include only qualifying MA organizations that participated in and received MA EHR incentive payments.

Further, we discussed that there may be MA organizations that participated in the incentive payment phase of the program, but then ceased being qualifying MA organizations, or that no longer have any qualifying MA–EPs or MA-affiliated eligible hospitals. We provided an example of a qualifying MA organization that contracts with a specific entity to deliver physicians' services during the payment phase of the EHR Incentive Program, but then the entity changes, or the MA organization loses its contract with the entity. We explained that such changes could cause the MA organization's MA EPs to no longer meet the 80/80/20 rule due to loss of the contract, or the entity might begin contracting with additional MA organizations. (See § 495.200, for the definition of ''Qualifying MA–EP.'') Therefore, we explained, the MA organization would not necessarily have its monthly payment adjusted because it might no longer meet the basic requirements under which MA EHR incentive payments were made to it.

Therefore, we proposed to adjust payments, beginning for payment adjustment year 2015, only for qualifying MA organizations that received MA EHR payments and that had potentially qualifying MA–EPs or MA-affiliated eligible hospitals that were not meaningful EHR users. We proposed to rely on the existing self-reporting requirement in redesignated § 495.202(b)(5) and subsequent audits to ensure compliance.

Comment: A commenter recommended that CMS apply MA payment adjustments to qualifying MA organizations only for the category of MA provider (that is, MA–EP versus MA-affiliated hospital) for which it claimed and received MA EHR incentive payments. For example, if a qualifying MA organization claimed incentive payments during the payment phase of the program only for MA–EPs and not for any MA-affiliated eligible hospitals, then the MA organization should only be required to report on qualifying and potentially qualifying MA–EPs during the adjustment phase of the program, and should not be subject to payment adjustments for MA-affiliated hospitals.

Response: We agree with the commenter that we will apply payment adjustments only to qualifying MA organizations for the category (or categories) of MA provider (either MA–EP, MA-affiliated eligible hospital, or both) for which it claimed and received MA EHR incentive payments. To the same extent that qualifying MA organizations have identified themselves and their qualifying MA–EPs and/or MA-affiliated eligible hospitals during the payment phase of the MA EHR Incentive Program, we expect them to continue to identify themselves and their MA–EPs and MA-affiliated hospitals during the adjustment phase of the program. We are taking this approach because we believe it would be impossible to verify that a given qualifying MA organization has potentially qualifying MA–EPs or MA-affiliated eligible hospitals, unless it had first identified those providers to us. We have modified § 495.211(c) to clarify that MA EHR payment adjustments with respect to MA-affiliated hospitals will only apply to qualifying MA organizations that previously received incentive payments under the MA EHR Incentive Program for MA-affiliated hospitals, and similarly, that MA EHR payment adjustments with respect to MA–EPs will only apply to qualifying MA organizations that previously received incentive payments under the MA EHR Incentive Program for MA–EPs.

We proposed to collect payment adjustments made under sections 1853(l)(4) and 1853(m)(4) of the Act after meaningful use attestations have been made. Final attestations of meaningful use occur after the end of an EHR reporting period, which for MA–EPs would run concurrent with the payment adjustment year. In the case of potentially qualifying MA-affiliated eligible hospitals, attestations of meaningful use would occur by the end of November after the EHR reporting period. As noted previously, we proposed to amend § 495.202(b) to indicate that in addition to initial identification of potentially qualifying MA–EPs and MA-affiliated eligible hospitals that are not meaningful users (as required by redesignated § 495.202(b)(5)), qualifying MA organizations would also need to finally identify such MA–EPs and MA-affiliated eligible hospitals within 2 months of the close of the applicable EHR reporting period. Final identification by qualifying MA organizations of potentially qualifying MA–EPs and/or MA-affiliated eligible hospitals that are not meaningful users would then result in application of a payment adjustment by CMS. On the other hand, final identification of all qualifying MA–EPs and/or MA-affiliated eligible hospitals as meaningful users would obviate an adjustment. We stated that, through audit, we would verify the accuracy of an applicable MA organization's assertions or nonreporting.

We proposed to adjust one or more of the qualifying MA organization's monthly MA payments made under section 1853(a)(1)(A) of the Act after the qualifying MA organization attested to the percent of hospitals and professionals that either were, or were not, meaningful users of certified EHR technology. We stated that, to the extent a formerly qualifying MA organization did not report under § 495.202(b)(4) or (5), we would verify, upon audit, the accuracy of the applicable MA organization's nondisclosure of such qualifying and potentially qualifying users.

Under our proposed approach, the adjustment would be calculated based on Part C payment data made under section 1853(a)(1)(A) of the Act for the payment adjustment year. We stated

that since an MA-affiliated eligible hospital must attest to meaningful use by November 30th, we could use the Part C payment information in effect at the time of the attestation to calculate the payment adjustment for a specific potentially qualifying MA-affiliated eligible hospital with respect to a specific MA organization. Although we expected (and preferred) to make an adjustment to a single MA monthly payment totaling the adjustment for the year, we requested comment on whether more than one monthly payment should be adjusted. We stated that one possible approach would be to make this decision on a case-by-case basis depending upon a given qualifying MA organization's situation (for example, payment adjustment amount versus MA organization monthly payment).

For payment adjustments based on potentially qualifying MA–EPs that are not meaningful users of certified EHR technology, we also proposed to calculate the adjustment based on the Part C payment made under section 1853(a)(1)(A) of the Act for the payment adjustment year. Because attestations of meaningful use for qualifying MA–EPs occur in February of the calendar year following the EHR reporting year, we noted that we could calculate the payment adjustment based on the prior MA payment year's payment, and that we could apply that adjustment to one or more of the prospective Part C payments. While we preferred to make an adjustment to one MA prospective payment for the full amount of the payment adjustment when possible, we solicited comment on whether we should make adjustments over several months or in a single month (for the entire adjustment amount), when possible. We received no comments on this proposal and therefore we are adopting the policy of collecting payment adjustments as quickly as possible in a single month, when possible.

Thus, adjustments for MA payment adjustment year 2015 would be based on MA payment data under section 1853(a)(1)(A) of the Act. However, while the payment adjustment for the 2015 payment adjustment year would be collected as soon as possible, we stated that this might not be until CY 2016 through an adjustment to the MA organization's MA capitation payment or payments under section 1853(a)(1)(A) of the Act.

We stated that proposed § 495.211(c) made clear that the potentially qualifying MA–EP and MA-affiliated eligible hospital payment adjustments would be calculated separately, and that each adjustment was applied to the qualifying MA organization's monthly payment under section 1853(a)(1)(A) of the Act. As discussed previously, we are modifying § 495.211(c) to clarify that MA EHR payment adjustments for MA-affiliated hospitals only apply to qualifying MA organizations that previously received incentive payments under the MA EHR Incentive Program for MA-affiliated hospitals, and that payment adjustments for MA–EPs only apply to qualifying MA organizations that previously received incentive payments under the MA EHR Incentive Program for MA–EPs.

Proposed paragraphs (a) through (c) would apply to adjustments based on both potentially qualifying and qualifying MA–EPs and MA-affiliated eligible hospitals that were not meaningful EHR users. Proposed paragraph (d) would apply only to adjustments based on potentially qualifying and qualifying MA–EPs that were not meaningful users of certified EHR technology. We also stated that paragraph (d) makes it clear that if a potentially qualifying MA–EP was not a meaningful user of CEHRT in payment adjustment year 2015 (and subsequent payment adjustment years), the qualifying MA organization's monthly Part C payment would be adjusted accordingly.

During the payment phase of the MA EHR Incentive Program qualifying MA organizations attest to meaningful use for each qualifying MA–EP and MA-affiliated eligible hospital they claimed. We also stated that during the payment adjustment phase of the program, we would need to know the percentage of both qualifying and potentially qualifying MA–EPs and MA-affiliated eligible hospitals that were not meaningful users of certified EHR technology. This percentage could be derived by taking the total number of the qualifying MA organization's qualifying and potentially qualifying MA–EPs, or MA-affiliated eligible hospitals, and identifying the portion of those MA–EPs or MA-affiliated hospitals that were not meaningful EHR users. We would use this percentage to make the adjustment proportional to the percent that were not meaningful users for a given adjustment year and qualifying MA organization.

Moreover, in determining the proportion of potentially qualifying MA–EPs and potentially qualifying MA-affiliated eligible hospitals (those that were not meaningful users), we would exclude EPs and hospitals that were neither qualifying nor potentially qualifying in accordance with the definition of ''qualifying'' and ''potentially qualifying MA–EPs'' and ''MA-affiliated eligible hospitals'' in § 495.200. Thus, an MA–EP that was a hospital-based EP would not be a qualifying or potentially qualifying MA–EP since such an EP did not meet item (5) of the definition of qualifying MA–EP in § 495.200 and thus would not be used in our computation of the proportion of MA–EPs for purposes of applying the payment adjustment. We proposed the following formula to apply the payment adjustments proposed in § 495.211(d)(2) to MA–EPs:

[the total number of potentially qualifying MA–EPs]/[(the total number of potentially qualifying MA–EPs) + (the total number of qualifying MA–EPs)].

Similarly, the formula we proposed for purposes of applying payment adjustments in § 495.211(e)(2)(iii) with respect to MA-affiliated hospitals was:

[the total number of potentially qualifying MA-affiliated eligible hospitals]/[(the total number of potentially qualifying MA-affiliated eligible hospitals) + (the total number of qualifying MA-affiliated eligible hospitals)].

Keeping in mind that redesignated § 495.202(b)(4) and (5) required qualifying MA organizations to identify potentially qualifying MA–EPs and potentially qualifying MA-affiliated eligible hospitals and to provide other information beginning for plan year 2015, we solicited comment on the question of whether, in the payment adjustment phase of this program, qualifying MA organizations with potentially qualifying MA–EPs and MA-affiliated eligible hospitals should—(1) still be required to attest to the meaningful use objectives and measures; or (2) instead be required only to report the percent of MA–EPs and MA-affiliated eligible hospitals that are not meaningful users of certified EHR technology. We suggested that commenters take into account that MA-affiliated eligible hospitals would still be required to perform a reporting function on behalf of their MA-affiliated organization in the National Level Repository (NLR), and that they were generally bound to ''subsection (d)'' hospital reporting requirements of the NLR. Thus, we were primarily interested in comments related to MA–EPs.

We explained that while we wished to minimize burden, we were also concerned with our ability to audit the information reported to ensure compliance with MA program requirements. Having received no comments on this provision, we therefore adopt a final requirement to

use only percentage-based reporting and, require MA organizations to retain and produce data and records necessary to substantiate their submissions, including evidence of meaningful use by those MA–EPs and MA-affiliated eligible hospitals so reported.

We proposed that payment adjustments for MA–EPs would be calculated by multiplying: (1) The percent established under § 495.211(d)(4) (which, in accordance with the statute, increases the adjustment amount up until 2017 and potentially beyond); with (2) the Medicare Physician Expenditure Proportion; and (3) by the percent of the qualifying MA organization's qualifying and potentially qualifying MA–EPs that were not meaningful users. We explained that section 1853(l)(4)(B)(i) of the Act requires MA payments to be reduced using the ''percentage points'' reduction of section 1848(a)(7)(A)(ii) of the Act. As section 1848(a)(7)(A)(ii) of the Act is ''subject to clause (iii),'' and as clause (iii) of that same provision requires payment adjustments to increase when the proportion of EPs who are meaningful EHR users is less than 75 percent, we proposed to apply a similar policy for the MA program. Specifically, we proposed that if the proportion of MA–EPs of a qualifying MA organization did not meet the 75 percent threshold (as determined in proposed § 495.211(d)(2)) in 2018 and subsequent years, the percentage reduction could increase to 4 percent in 2018, and 5 percent in 2019 and subsequent years. We did not propose a possible 2 percent reduction for 2015 (consistent with the Medicare FFS EHR Incentive Program when an EP is subject to an adjustment in 2014 under the e-prescribing program), because MA organizations are not independently subject to e-prescribing payment adjustments.

We proposed that the Medicare Physician Expenditure Proportion for a year would be the Secretary's estimate of expenditures under Parts A and B not attributable to Part C that are attributable to expenditures for physician services. While we proposed a uniform portion for all MA organizations, we also proposed to adjust the proportion on a more individual basis to account for the fact that qualifying MA organizations may contract with a large number of EPs that are neither qualifying nor potentially qualifying. We explained that this individualized policy was based on the statutory language in section 1853(l)(1) of the Act, which states that the provisions of section 1848(a)(7) of the Act (that is, the payment adjustments) apply ''with respect to'' the EPs ''described in paragraph (2)'' of section 1853(l) of the Act. As section 1853(l)(2) of the Act creates several additional requirements for MA–EPs (that is, that they be employed by the qualifying MA organization, that they meet the 80/80/20 requirements, and so on), we proposed adjusting the Physician Expenditure Proportion to recognize that many EPs may not qualify as MA–EPs, regardless of meaningful use. Thus, we proposed to adjust each MA organization's Physician Expenditure Proportion to recognize that not all of the EPs would meet the technical (nonmeaningful use) requirements to be potentially qualifying or qualifying MA–EPs. Without our proposed adjustment, a small sample size of MA–EPs could magnify the reduction amount during the payment adjustment phase of the program, because the actions of a limited set of qualifying and potentially qualifying MA–EPs (and whether they meaningfully used certified EHR technology) would determine whether all of an MA organization's physician expenditure proportion was reduced.

We provided an example of our proposed MA payment adjustment for adjustment year 2015 as follows:

Assume the hypothetical Medicare Physician Expenditure Proportion, adjusted as described previously, is 10 percent for 2015;

The qualifying MA organization's percent of qualifying and potentially qualifying MA–EPs that are not meaningful users is 15 percent for 2015; and

The monthly payment in 2015 for the given qualifying MA organization is $10,000,000.

The proposed formula would read as follows:

0.01 (the payment adjustment for 2015) × 0.1 (the hypothetical Medicare Physician Expenditure Proportion) × 0.15 (the percentage of qualifying and potentially qualifying MA–EPs that are not meaningful EHR users) × $10,000,000 (monthly Part C payment) × 12 (number of months in the MA payment year) = $18,000 for the entire year, or $1,500 a month. We proposed that this adjustment would then be collected against one or more of the qualifying MA organization's payments under section 1853(a)(1)(A) of the Act.

In proposed § 495.211(e), we set out a formula for payment adjustments based on potentially qualifying MA-affiliated eligible hospitals that are not meaningful users of certified EHR technology.

We proposed an adjustment equal to the product of the following:

- Monthly Part C payment for the payment adjustment year;
- The percentage point reduction that applies to FFS hospitals as a result of section 1886(b)(3)(B)(ix)(I) of the Act;
- The Medicare hospital expenditure proportion, adjusted in the same manner as the Physician Expenditure Proportion to recognize that not all hospitals are necessarily qualifying or potentially qualifying MA-affiliated eligible hospitals; and
- The percentage of qualifying and potentially qualifying MA-affiliated eligible hospitals of a given qualifying MA organization that are not meaningful users of certified EHR technology.

We proposed that the percentage point reduction of the first bullet (that is, the reduction that applies as a result of section 1886(b)(3)(B)(ix)(I) of the Act) would be based on the point reduction that results when three-fourths of the otherwise applicable percentage increase for the fiscal year was reduced by 33⅓ percent for FY 2015, 66⅔ percent for FY 2016, and 100 percent for FY 2017 and subsequent fiscal years. We stated this had the result of decreasing the otherwise applicable market basket update by one-fourth (for 2015), one-half (for 2016), and three-fourths (for 2017 and subsequent payment adjustment years).

We stated that the Medicare Hospital Expenditure Proportion for a year was the Secretary's estimate of expenditures under Medicare Parts A and B that were not attributable to Part C, that were attributable to expenditures for inpatient hospital services. As mentioned previously, we proposed that this proportion reflects only the MA-affiliated eligible hospitals that were either qualifying or potentially qualifying MA-affiliated eligible hospitals.

We also proposed to use the market basket percentage increase that would otherwise apply to ''subsection (d)'' hospitals for an MA payment adjustment year. We provided the following hypothetical example. The market basket percentage increase for FY 2015 was hypothetically 4 percent. Three-quarters of one-third of 4 percent would be 1 percent. The hypothetical Medicare Hospital Expenditure proportion for the year was 15 percent, and one of two of the relevant MA-affiliated eligible hospitals was not a meaningful EHR user for the applicable period (FY 2015). The monthly payment to the MA organization in 2015 was $10,000,000 a month.

The calculation would be as follows:

0.01 (the market basket percentage point reduction) × 0.15 (the Medicare Hospital Expenditure Proportion) × 0.5 (percent of the qualifying MA organization's qualifying and potentially qualifying MA-affiliated eligible hospitals that are not meaningful users) × $10,000,000 (monthly Part C payment) × 12 (number of months in the MA payment year) = $90,000 for the year, or $7,500 a month. The payment adjustment would be applied on either a monthly basis, or in one adjustment. As stated previously, we requested comment on this aspect of the final rule.

Comment: A commenter stated that the formula for computing the Medicare Physician Expenditure Proportion percent in § 495.211(d)(3)(ii) was not clear on whether physicians who saw no Medicare patient at all would be excluded from the expenditure proportion calculation (for example, most pediatricians), and whether a distinction would be made between services provided by MA–EPs and potential MA–EPs of the organization, and other physicians and the services they provide. The commenter explained that under the model of reimbursement for physician services it uses, the ability to track Part A and Part B costs to individual physicians was limited. The commenter proposed an alternate method for computing the Medicare Physician Expenditure Proportion based on what it called a ''uniform distribution model as a proxy for the adjustment to the MPEP percent.''

Response: We believe it is unnecessary to specifically exclude physicians, such as pediatricians, who see no Medicare patients from the Medicare Physician Expenditure Proportion calculation. Expenditures that are provided by EPs that are neither qualifying nor potentially qualifying MA–EPs are already adjusted out. This would be true in two ways for physicians, such as pediatricians, who see no Medicare patients. First, these physicians would not meet item (2) of the definition of a ''qualifying MA–EP'' in § 495.200, since these physicians do not provide ''at least 80 percent'' of their Medicare-covered professional services to enrollees of the qualifying MA organization. Since they provide no Medicare-covered professional services to enrollees of the qualifying MA organization, they do not meet the ''80 percent'' requirement. Second, the Physician Expenditure Proportion is based only on Medicare expenditures for physician services (that is, the proportion of expenditures under Parts A and B not attributable to Part C that are attributable to expenditures for physician's services). Physician expenditures for non-Medicare services (like most services of a pediatrician) do not count in the calculation. Finally, we do not believe an alternative method of computing the Medicare Physician Expenditure Proportion is necessary and therefore are not considering the alternate approach proposed by this commenter in this final rule. It should be noted that tracking Part B costs to individual MA–EPs (physicians) is a critical part of determining the incentive payment due a qualifying MA organization (see 42 CFR 495.204(ff)). To the extent methodologies for estimating the portion of MA–EP compensation that is attributable to Part B professional services are used during the payment phase of the MA EHR Incentive Program, we believe these methodologies can also be successfully used during the adjustment phase of the Program.

Comment: A commenter questioned if section 3401 of the Affordable Care Act market basket update adjustment due to changes in economy-wide productivity for FY 2012 and each subsequent fiscal year would be included, or if any other adjustment would be included in the market basket update rate used in the penalty adjustment formula.

Response: Section 1853(m)(4)(B)(i) of the Act directs us to use the ''number of the percentage point reduction effected under section 1886(b)(3)(B)(ix)(I) for the period.'' That reduction is based off of a starting point of the applicable percentage increase otherwise applicable under clause (i), while mandating that this be ''determined without regard to clause (viii), (xi), or (xii)'' of section 1886(b)(3)(B) of the Act. Thus, the starting point for determining the percentage points by which the update is reduced is the applicable percentage increase in clause (i) of section 1886(b)(3)(B) of Act, before it has been further reduced for productivity (under clause (xi) for other statutory reductions (in clause (xii)), or for failure to report on certain measures (under clause (viii)). Currently, the applicable percentage increase in clause (i), before the other reductions have been made, is the market basket percentage increase for hospitals in all areas. Thus, such a market basket increase will be our starting point, and the percentage points by which that increase is reduced solely due to the application of EHR Program adjustments will be the point reduction we use in the MA formula.

Comment: A commenter proposed an alternate method for computing the Medicare Hospital Expenditure Proportion based on what they believe is ''consistent with fee-for-service hospital penalties.''

Response: We believe our proposed method is consistent with the method the Medicare fee-for-service program will use to implement EHR adjustments for ''subsection (d)'' hospitals.

Comment: One commenter expressed concern that CMS had proposed that payment adjustments would be based on an earlier payment period.

Response: We believe the commenter is confused, as we did not propose a prior EHR reporting period for the MA program.

We received no other comments on this section of the proposed rule. After consideration of the public comments received, we are finalizing these provisions as proposed with the one modification noted to § 495.211(c).

6. Reconsideration Process for MA Organizations

We proposed a reconsideration process in new section, § 495.213. We did not receive any comments on the proposed process. However, for the reasons stated in section II.D.5 of this final rule, we do not believe formal regulations for an informal reconsideration procedural rule are necessary and therefore we are not including this new section in this final rule.

As noted in the proposed rule and as required by statute, our administrative reconsideration process would not permit administrative review of the standards and methods used to determine eligibility and payment (see sections 1853(l)(8) and (m)(6) of the Act, and § 495.212 of the regulations). However, it would allow a reconsideration of the application of such standards and methods, in certain circumstances.

F. Revisions and Clarifications to the Medicaid EHR Incentive Program

Unless otherwise specified, the changes discussed in this section of the rule will take effect upon publication of this final rule.

1. Net Average Allowable Costs

In this final rule, we are formalizing through rulemaking the guidance that was shared with state Medicaid Directors in a letter on April 8, 2011 (available at: *http://www.cms.gov/smdl/downloads/SMD11002.pdf*). These technical changes are required to implement section 205(e) of the Medicare and Medicaid Extenders Act of 2010 (Extenders Act, Pub. L. 111–309). The Extenders Act, enacted on

December 15, 2010, amended sections 1903(t)(3)(E) and 1903(t)(6)(B) of the Act. The amended sections change the requirements for an EP to demonstrate the ''net average allowable costs,'' the contributions from other sources, and the 15 percent provider contribution requirements to participate in the Medicaid EHR Incentive Payment Program. The Extenders Act provided that an EP has met this responsibility, as long as the incentive payment is not in excess of 85 percent of the net average allowable cost ($21,250 for first year payments).

Before the Extenders Act, Medicaid EPs who wanted to participate in the EHR Incentive Payment Program were required to provide documentation of certain costs related to acquiring and implementing certified EHR technology. The Extenders Act amended the relevant statute by allowing for providers to simply document and attest that they have adopted, implemented, upgraded, or meaningfully used certified EHR technology, while allowing us to set these average costs.

As a result, rather than requiring each EP to calculate the payments received from outside sources, each will use the average costs and contribution amount we established. After conducting a meta-analysis of existing data of an EP's costs to adopt, implement, or upgrade certified EHR technology, we determined that average contributions from outside sources should not exceed $29,000. The documentation originally required by an EP to demonstrate that he or she contributed 15 percent (for example, $3,750 for year 1) of the ''net average allowable costs'' is also no longer needed. The Act now provides that an EP has met this responsibility as long as the incentive payment is not in excess of 85 percent of the net average allowable cost ($21,250). Given that this change is already in effect, we proposed to remove from the required content in the state Medicaid HIT Plan, the requirement that states describe the process in place to ensure that Medicaid EHR incentive payments are not paid at amounts higher than 85 percent of the net average allowable cost of certified EHR technology, as described in § 495.332.

We received no comments on our proposal to codify this already-existing policy, and we are finalizing our proposals without modification.

TABLE E1—DETERMINATION OF NET AVERAGE ALLOWABLE COSTS FOR THE FIRST PAYMENT YEAR

First year variables [1]	Amounts	Prior to Extenders Act changes	Currently
Average Allowable Costs.	$54,000	Determined through a CMS meta-analysis, described in both the proposed rule (75 FR 1844) and the final rule (75 FR 44314).	No change.
Contributions from Other Sources.	Does not exceed $29,000.	Subtracted from Average Allowable Costs to reach ''Net'' Average Allowable Costs. An EP was required to show documentation of all contributions from certain other sources.	No documentation is needed. We have determined that average contributions do not exceed $29,000.
Capped Amount of ''Net'' Average Allowable Costs.	$25,000	Capped by statute and designated in CMS final rule.	No change.
Contribution from the EP.	$3,750	An EP was required to demonstrate that he or she had contributed at least 15 percent of the net average allowable costs towards a certified EHR.	No documentation needed. Determined to have been met by virtue of EP receiving no more than $21,250 in the first payment year.
Incentive payment [2]	$21,250	85 percent of the Net Average Allowable Costs; determined through statute. An EP could receive less than this amount if he or she had contributions from other sources exceeding $29,000.	All EPs will receive the maximum incentive payment of $21,250, as all EPs will be determined to have contributions from other sources under $29,000.

[1] These same concepts (but not figures) apply to the second through sixth years, integrating the figures from the Stage 1 final rule. Ultimately, the incentive paid in the second through sixth years is still the statutory maximum of $8,500.

[2] This figure is further reduced to two-thirds for pediatricians qualifying with reduced Medicaid patient volumes. This is described at 42 CFR 495.310.

2. Definition of Adopt, Implement Upgrade

We are adding clarifying language that maintains our policy that to qualify for an AIU payment, a provider must adopt, implement or upgrade to certified EHR technology that would allow that provider to qualify as a meaningful user. Our regulation has always defined certified EHR technology by reference to the ONC definition at 45 CFR 170.102, and ONC's definition of certified EHR technology has consistently required the technology to support meaningful use. While ONC is changing the definition of certified EHR technology, we do not believe this change would allow a provider to receive an incentive for technology that could not support meaningful use (that is for purchasing only ''Base EHR'' technology). Nevertheless, in order to be absolutely clear in our regulations, we are amending them to ensure that providers do not receive Medicaid incentives for adopting technology that would not allow them to demonstrate meaningful use.

3. Eligibility Requirements for Children's Hospitals

We proposed to revise the definition of a children's hospital in § 495.302 to also include any separately certified hospital, either freestanding or hospital within hospital that predominately treats individuals under 21 years of age; and does not have a CMS certification number (CCN) because they do not serve any Medicare beneficiaries but has been provided an alternative number by CMS for purposes of enrollment in the Medicaid EHR Incentive Program. We will provide future guidance on how to obtain these alternative numbers.

The only comments we received on this proposal were favorable. We are finalizing these policies as proposed. Guidance to these hospitals and the states on enumeration and determining eligibility is also forthcoming.

4. Medicaid Professionals Program Eligibility

Section 1903(t) of the Act authorizes Medicaid payments to encourage the adoption and use of certified EHR

technology, and places Medicaid patient volume requirements on EPs to qualify for such payments under the Medicaid program. Patient volume requirements ensure that Medicaid funding is used to encourage the adoption and use of technology specifically to benefit the care of Medicaid populations. Therefore, we proposed that at least one of the clinical locations used for the calculation of an EP's patient volume have CEHRT during the payment year for which the EP is attesting to adoption, implementation or upgrade or meaningful use. This will ensure that Medicaid funding goes to EPs using CEHRT to improve Medicaid patients' care.

The only comments that we received on this proposal were in support of the proposal. For the reasons explained in the proposed rule, we are finalizing this policy as proposed. We have amended § 495.304 and § 495.332 accordingly.

a. Calculating Patient Volume Requirements

We proposed to revise § 495.306(c) to allow states the option for their providers to calculate total Medicaid encounters or total needy individual patient encounters in any representative, continuous 90-day period in the 12 months preceding the EP or eligible hospital's attestation. This option will be in addition to the current regulatory language that bases patient volume on the prior calendar or fiscal year. We believe this adjustment will provide greater flexibility in eligible providers' patient volume calculations.

Likewise, we proposed to revise § 495.306(d)(1)(i)(A) to allow for the calculation of the total Medicaid patients assigned to the EP's panel in any representative, continuous 90-day period in either the preceding calendar year, as is currently permitted, or in the 12 months preceding the EPs' attestation, when at least one Medicaid encounter took place with the Medicaid patient in the 24 months prior to the beginning of the 90-day period. We also proposed to revise § 495.306(d)(1)(ii)(A) accordingly, so that the numerator and denominator are using equivalent periods. We proposed conforming changes to § 495.306(d)(2)(i) and (ii) for needy individual patient volume. We proposed changing the period during which the encounter must take place from 12 months to 24 months to account for new clinical guidelines from the U.S. Preventive Health Services Task Force that allow greater spacing between some wellness visits. Therefore, in order for a patient to be considered ''active'' on a provider's panel, we proposed 24 months is more appropriate. This change is also in order to be consistent with the proposed Stage 2 meaningful use measure for patient reminders sent to ''active patients.''

The only comments we received on this proposal were supportive. For the reasons explained in the proposed rule, we are finalizing this policy as proposed. We note that as explained in the proposed rule, this will be an option for states to implement at their discretion. States must seek prior approval from CMS via an amendment to their state Medicaid HIT Plan before implementing this change.

We also proposed to expand the definition of ''encounter'' to include any service rendered on any one day to an individual enrolled in a Medicaid program. We explained that such a definition will ensure that patients enrolled in a Medicaid program are counted, even if the Medicaid program did not pay for the service (because, for example, a third party payer paid for the item or service, or the service is not covered under Medicaid). We also explained that the definition would include encounters for patients who are Title XIX eligible and who meet the definition of ''optional targeted low income children'' under section 1905(u)(2) of the Act. Thus, individuals in Title XXI-funded Medicaid expansions (but not separate CHIPs) could be counted in providers' patient volume calculations. We stated that this approach is consistent with existing policies that provide Title XIX protections to children enrolled in Title XXI-funded Medicaid expansions.

In the proposed rule, we noted that as of 2010, 33 states have Title XXI Medicaid expansions via approved state plan amendments. Therefore, under our proposed policy, providers in those states would be able to include encounters with individuals in such expansions in their patient volume calculation for purposes of this program. In 2010, over 2.1 million children were covered in Medicaid expansion programs. We stated that our proposed change would likely increase the number of eligible providers who qualify for the Medicaid EHR Incentive Program, particularly those serving children because it allows states to create a larger base of Medicaid patients to be counted toward the patient volume requirements than existed under the Stage 1 rule.

Comment: Some commenters were concerned about verifying patient volume requirements for patients seen for a service where Medicaid did not pay for all or part of the service. Commenters asked CMS to clarify the prepayment audit expectations of states with this broader definition.

Response: This final rule does not change states' obligations to complete due diligence to verify all eligibility criteria, including patient volume. Existing subregulatory guidance is available to states to assist in developing audit processes. We encourage states to take advantage of those materials, guidance, and technical assistance resources that we have made available to support their auditing activities.

Comment: Commenters, while supportive of these changes, inquired whether these changes would be retroactive and affect payments already disbursed. They asked, for example, whether EPs who attested to Medicare for CY 2011 would be able to refund Medicare incentive payments and qualify for the Medicaid payment; or whether pediatricians who received the incentive for a patient volume of 20 percent would be able to receive a replacement payment associated with the 30 percent patient volume.

Response: These changes are not retroactive. Patient volume requirements for 2011 and 2012 are not affected by these changes. Eligibility for the program is determined at the time of attestation and prior to payment. States should implement this new definition of an encounter no later than 6 months after this rule is published and only for providers attesting for the 2013 program year and subsequent program years. In no event will this definition apply to attestations for the 2012 program year.

Comment: Commenters also inquired whether these new eligibility changes meant that an EP or eligible hospital denied an incentive payment because of failure to satisfy patient volume requirements could reapply in the same program year.

Response: As explained in our response to the previous comment, these changes would not be retroactive. Existing rules permit an EP or eligible hospital to reapply if they fail to meet the requirements for an incentive payment. If a provider fails to meet the requirements in 2013 before their state has implemented this change, they may then reapply after the change is made to their state's systems. Additionally, an EP or eligible hospital denied eligibility in a previous year is always permitted to reapply for a subsequent year (subject to rules for EPs switching programs as explained in § 495.10).

For the reasons explained in the proposed rule, and because this change will help more Medicaid providers qualify for the program, we are finalizing this policy as proposed. The expanded definition of encounter will

include individuals enrolled in Medicaid who had a billable service on any one day during the 90-day patient volume timeframe.

In our proposed rule, we also clarified that we understand that multiple providers may submit an encounter for the same individual. For example, it may be common for a PA or NP to provide care to a patient, then a physician to also see, or invoice for services to that patient. We explained that it is acceptable in these and similar circumstances to count the same encounter for multiple providers for purposes of calculating each provider's patient volume when the encounters take place within the scope of practice. We did not receive any comments on this clarification and retain it for the final rule.

b. Practices Predominantly

Similar to our proposed revisions for patient volume, we proposed to revise the definition of ''practices predominantly'' at § 495.302 in order to provide more flexibility for eligible professionals and states. A state could choose to allow EPs to use either: (1) The most recent calendar year; or (2) the most recent 12 months prior to attestation. Also, as with the previously noted patient volume changes, these ''practices predominantly'' changes are not retroactive. Patient volume requirements for 2011 and 2012 are not affected by these changes. States should implement this new definition of an encounter no later than 6 months after this rule is published and only for providers attesting to meeting program requirements for the 2013 program year and subsequent program years. In no event will this definition apply to attestations for the 2012 program year.

Comment: Some commenters—commenting on the patient volume changes in § 495.306, the ''practice predominantly'' changes in § 495.302, and the revised definition of encounter—expressed concerns about the system challenges associated with such changes. They requested that CMS consider the burden on state systems to implement these changes.

Response: We recognize that system changes must be considered when enacting or revising policies. However, we note that much of what we have proposed would be optional for states, while some would be required. We believe our final rule strikes a balance between optional and required policies for states, and providing 6 months to make systems changes balances implementation timelines with the overall goal to promote EHR adoption through the Medicaid EHR Incentive Program. We note that states receive 90 percent Federal matching funds for administrative costs associated with the EHR Incentive Program.

Comment: Although we did not make any proposals on the subject, some commenters requested a more prescriptive definition of pediatrician be provided to the states that includes pediatric ophthalmologists.

Response: We did not make any proposals on the definition of pediatrician. This final rule does not change the previous flexibility that states had to define pediatrician. In some states, pediatric ophthalmologists are eligible for the program, but that is entirely dependent on how the state has chosen to define pediatrician. This suggestion is also outside the scope of this rulemaking.

After consideration of the public comments received, we are finalizing the revised definition of ''practices predominantly'' at § 495.302 as proposed; this revised definition is applicable to providers attesting to meeting program requirements for the 2013 program year and subsequent program years.

5. Medicaid Hospital Incentive Payment Calculation

a. Discharge Related Amount

In order to ensure that Medicaid regulations are consistent with Medicare, we proposed that the Medicaid calculation should be consistent with the Medicare calculation found in § 495.104(c)(2). Our current regulations at § 495.310(g)(1)(i)(B) require the use of the ''12-month period selected by the state, but ending in the Federal fiscal year before the hospital's fiscal year that serves as the first payment year.'' We also published a tip sheet with additional guidance on the Medicaid hospital incentive payment calculation, which can be found at: (*https://www.cms.gov/MLNProducts/downloads/Medicaid_Hosp_Incentive_Payments_Tip_Sheets.pdf*). However, some hospitals may not have a full 12 months of data ending with the Federal fiscal year immediately preceding the first payment year, or they may have a slightly older 12-month period that could be used. Therefore, we have revised our regulations at § 495.310(g)(1)(i)(B) to allow states to use, for the purpose of calculating the discharge related amount, and other determinations (such as inpatient bed days), the most recent continuous 12-month period for which data are available prior to the payment year. If such 12-month period is a cost report, it should be one, single 12-month cost reporting period (and not a consolidation of two separate cost reporting periods). If it is an alternative source different from the cost report, we will rely on the state to ensure that the source is an appropriate source, and that the period is a continuous 12 months, and that the state is using the most recent data that are available. States should implement these changes only for hospitals that begin participation in the program starting in federal fiscal year 2013 or subsequent federal fiscal years. Hospitals that began participation before federal fiscal year 2013 must use discharge data from the hospital fiscal year that ends during the federal fiscal year prior to the hospital fiscal year that serves as the first payment year.

Comment: Commenters were concerned that hospitals may not have a full 12 months of data available ending with the Federal fiscal year immediately preceding the first payment year, thus restricting hospitals participation in the program.

Response: We appreciate the commenters concern; however, the change in regulatory language does not require hospitals to use data immediately preceding the first payment year, but rather the most recent 12 consecutive months of data available to the hospital prior to the payment year. The intent of this regulatory change was to encourage timely participation in the program. For the base year, the former policy required hospitals to initiate participation using a 12-month period ending in the Federal fiscal year before the hospital's fiscal year that serves as the first payment year. In recognition of this challenge, we are changing the regulation at § 495.310(g)(1)(i)(B) to allow hospitals to use, for purposes of determining the base year for the Medicaid incentive payment calculation, the most recent continuous 12-month period for which data are available prior to the payment year. Only those hospitals that begin participation in program year 2013 and beyond will be affected by this change. Hospitals that began participation in the program before 2013 will not have to adjust previous calculations.

Comment: A commenter suggested that ''the most recent data that are available'' is ambiguous. Hospital cost report data are subject to significant audit and adjustments subsequent to their submission to the state, so the definition of ''available'' has a large impact on the reliability of the data used to calculate the incentive payment amount. The commenter noted that the state and CMS have a strong interest in ensuring that the data used to calculate

the hospital incentive payment is accurate, defensible, and final, and the use of data that are not properly audited would create a significant potential for issuing incentive payments that would later need to be adjusted. The commenter suggested that CMS clarify ''the most recent data that are available'' means the most recent data that, in the judgment of the state, are properly audited and finalized.

Response: We appreciate the commenters concern; however, we do not agree that the data needs to be audited and finalized in order to be used for the incentive payment calculation. It is our expectation that the hospital incentive payment is calculated using the most accurate data available at the time of calculation and it is the responsibility of the state to make the determination of which source is most accurate. We do not restrict data sources, as we believe the states are best positioned to balance the accuracy and timeliness of the data available. Medicare pays hospitals using preliminary, filed, cost report data and reconciles payment when the data is audited and finalized. Similarly, we allow states to adjust calculations and reconcile payments when audited and finalized data are available. State policy changes or proposals regarding reconciliation of hospital incentive payments must be reflected in the state' Medicaid Health Information Technology Plan (SMHP) and must be reviewed and approved by CMS.

b. Acute Care Inpatient Bed Days and Discharges for the Medicaid Share and Discharge-Related Amount

In order to ensure that the regulations accurately reflect our current policy, we proposed to amend the hospital payment regulations at § 495.310(g)(1)(i)(B) and (g)(2) to recognize that only acute-care discharges and bed-days are included in our calculations. We currently require that only discharges from the acute care part of the hospital may be counted in both the discharge-related amount and the Medicaid share. For example, in response to a frequently asked question (*https://questions.cms.gov*, FAQ #2991), we explained that nursery days and nursery discharges (for newborns) could not be counted in both the Medicare and Medicaid EHR incentive programs. We stated: ''[N]ursery days and discharges are not included in inpatient bed-day or discharge counts in calculating hospital incentives * * * because they are not considered acute inpatient services based on the level of care provided during a normal nursery stay.''

Such regulatory amendments do not represent a change in policy but rather a clarification of existing policy. The Medicaid share will count only those days that will count as inpatient-bed days for Medicare purposes under section 1886(n)(2)(D) of the Act. (See 75 FR 44498). In addition, in determining the overall EHR amount, section 1903(t)(5)(B) of the Act requires the use of applicable amounts specified in section 1886(n)(2)(A) of the Act.

Comment: A commenter expressed concern with the perceived removal of newborn nursery days from the hospital calculation. The commenter stated that this would create a disadvantage for some hospitals.

Response: We wish to be clear our policy on nursery days is not a new policy or a proposed change. The change in regulatory language on the use of acute inpatient bed days is to ensure that our regulation text clearly reflects our existing policy. The requirement to exclude non-acute inpatient bed days from the incentive payment calculation is consistent with both the Medicare and Medicaid regulations under Stage 1, as stated in our frequently asked questions (available at *https://questions.cms.gov*, FAQ #2991). In that FAQ, we explain that the Medicaid payment to hospitals is based largely on the method that applies to Medicare incentive payments. Because such nursery discharges and bed days would not be included in the Medicare calculation, and because the Medicaid statute incorporates Medicare concepts, they also would not be counted in the Medicaid formula. We are simply adding additional language to clarify that all bed days and discharges used in the calculation are strictly limited to the acute-inpatient portion of the hospital. All hospitals will continue to exclude nonacute bed days and discharges from the hospital incentive calculation.

Comment: A commenter suggested that CMS clarify and inform states and providers that neonatal intensive care days are considered acute, and should be included in the Medicaid hospital incentive payment calculation.

Response: We appreciate the commenter's suggestion and recognize that neonatal intensive care days are considered acute inpatient services that should be included in the hospital incentive calculation.

c. Hospitals Switching States

There may be a situation where a hospital changes participation in one state Medicaid EHR incentive program to participation in another state. We are clarifying that in no case will a hospital receive more than the aggregate incentive amount calculated by the state from which the hospital initiated participation in the program. Section 495.310(e) requires a hospital to choose only one state per payment year from which to receive an incentive payment. Additionally, § 495.310(f)(2) states that in no case can total incentives received by a hospital exceed the aggregate EHR incentive amount, as calculated in § 495.310(g).

In this scenario, both states will be required to work together to determine the remaining payments due to the hospital based on the aggregate incentive amount and incentive amounts already paid. The hospital will then assume the second state's payment cycle, less the money paid from the first state. States should consult with CMS before addressing this specific scenario.

We did not receive any comments and we are finalizing these provisions as proposed for the reasons provided in the proposed rule.

6. Hospital Demonstrations of Meaningful Use—Auditing and Appeals

We proposed revisions to § 495.312 under which states would have the option for CMS to conduct audits and handle any subsequent appeals of whether eligible hospitals are meaningful EHR users, on the state's behalf. (We note that the preamble text (at 77 FR 13788) did not reflect the proposed regulations.) We also proposed revisions to the SMHP requirements in § 495.332 by adding a new paragraph (g) that would allow the state, at the state's option, to include a signed agreement if the state has opted for CMS to conduct such audits and appeals. Under these proposals, the state electing the option would be required to (1) designate CMS to conduct all audits and appeals of eligible hospitals' meaningful use attestations; (2) be bound by the audit and appeal findings; (3) perform any necessary recoupments arising from the audits; and (4) be liable for any FFP granted the state to pay eligible hospitals that, upon audit (and any subsequent appeal) are determined not to have been meaningful EHR users. Finally, we proposed to revise our regulations at § 495.370 to make clear that results of any adverse CMS audits (for states that have made the election) would be subject to the CMS administrative appeals process and not the state appeals process.

Most hospitals are eligible for both Medicare and Medicaid incentive payments, submit attestations on meaningful use to us under the Medicare attestation system, and, if

successful, under the authority of section 1903(t)(8) of the Act, are deemed to have met the meaningful use requirements for Medicaid. Thus, we believe the revisions that were included in our proposed regulation text would provide states with the option to alleviate their burden to develop an audit process for hospitals and then perform audits on hospitals' meaningful use attestations. Because the regulation text made the CMS audits and appeals a state option, no state would be required to delegate the responsibility to CMS.

As discussed in the proposed rule preamble, many states indicated an interest in having CMS audit all hospitals' meaningful use attestations, and a majority of states have two or fewer Medicaid-only hospitals applying for incentive payments. Therefore, a state option for CMS to conduct audits and appeals will leverage the resources already devoted to auditing the vast majority of hospitals that are eligible for both incentive programs while retaining state flexibility to perform their own meaningful use audits and appeals for the Medicaid-only hospitals in states that choose to do so. (In cases where a state has made the election, meaningful use attestation data collected by states for the Medicaid-only eligible hospitals would be shared with our auditors to enable this process).

As discussed in the proposed rule, we note that this policy does not extend to Medicaid eligible professionals, given the anticipated large number of Medicaid eligible professionals demonstrating meaningful use solely under the Medicaid program. In addition, states that opt for CMS to conduct audits and appeals will remain responsible for auditing all other aspects of eligibility for both EPs and eligible hospitals for incentive payments, including, but not limited to—(1) adopt, implement or upgrade; (2) patient volume; (3) average stay length; and (4) calculation of payment amounts. States will also remain responsible for auditing EPs for compliance with meaningful use of certified EHR technology.

We did not receive any comments on either the preamble or the regulation text, and we are finalizing the proposed regulations for the reasons discussed previously.

7. State Flexibility for Stage 2 of Meaningful Use

We proposed to offer states flexibility with the public health measures in Stage 2, similar to that of Stage 1, subject to the same conditions and standards as the Stage 1 flexibility policy. This applies to the public health measures as well as the measure to generate lists of specific conditions to use for quality improvement, reduction of disparities, research or outreach. In addition, we proposed that whether moved to the core or left in the menu, states could also specify the means of transmission of the data or otherwise change the public health measure, as long as it does not require EHR functionality above and beyond that which is included in the ONC EHR certification criteria as finalized for Stage 2 of meaningful use.

We did not receive any comments on this policy. Although § 495.316(d)(2) already contains provisions for state flexibility, there are new public health measures for Stage 2 of meaningful use and some of the descriptions are changing slightly for Stage 2. Therefore, in this final rule, we have amended § 495.316(d)(2) to ensure that the objectives for which states will have flexibility are adequately represented for both Stage 1 and Stage 2.

8. State Medicaid Health Information Technology Plan (SMHP) and Implementation Advance Planning Document (IAPD)

a. Frequency of Health Information Technology (HIT) Implementation Advanced Planning Document (IAPD) Updates

We proposed to revise § 495.342 regarding the frequency of HIT IAPD updates. Rather than requiring each state to submit an annual HIT IAPD within 60 days from the HIT IAPD approved anniversary date, we proposed to require that a state's annual IAPD (also known as an IAPD Update (IAPD–U)) be submitted a minimum of 12 months from the date of the last CMS approved HIT IAPD. For example, if the initial HIT IAPD or previous IAPD–U was approved by CMS effective July 25, 2011, the state must submit their next HIT IAPD–U on or before July 25, 2012. Therefore, annual IAPD updates are required only if the state has not submitted an IAPD–U in the past 12 months, rather than on a fixed annual basis as currently reflected in § 495.342. We did not propose to change the requirements of the circumstances of ''as needed'' IAPD updates as defined by § 495.340.

Comment: Comments received on the change to the annual HIT IAPD submission deadline requirements were supportive of the change and the idea of reducing the administrative burden on states. A commenter requested that the phrase, ''minimum of 12 months'' be changed to ''maximum of 12 months.''

Response: We believe that a better solution would be to remove the word ''minimum'' from the text so it reads, ''Each state is required to submit the HIT IAPD Updates 12 months from the date of the last CMS approved HIT IAPD and must contain the following.'' This more accurately describes the intent to clarify the timeline in which the state must submit the annual HIT IAPD. Therefore, § 495.342 is revised accordingly.

b. Requirements of States Transitioning From HIT Planning Advanced Planning Documents (P–APDs) to HIT IAPDs

We proposed the following process for states that have an approved HIT P–APD and are ready to submit a HIT IAPD for review and approval. We do not allow states to have more than one HIT Advance Planning Document (APD) open at a time. If planning activities from the HIT P–APD have been completed, in their HIT IAPD the state should explain in a narrative format that all planning activities have been completed and the planning advanced planning document can be closed out. If there are HIT planning activities that the state determines will continue during the implementation period, these planning activities must be included as line items within the HIT IAPD budget.

We did not receive any comments on this discussion of the process states should use. We will use the previously-described process for states transitioning from a HIT P–APD to a HIT IAPD.

III. Waiver of Delayed Effective Date

We ordinarily provide a 60-day delay in the effective date of the provisions of a major rule in accordance with the Administrative Procedure Act (APA) (5 U.S.C. 553(d), which requires a 30-day delayed effective date, and the Congressional Review Act (5 U.S.C. 801(a)(3), which requires a 60-day delayed effective date for major rules. However, we can waive the delay in effective date if the Secretary finds, for good cause, that such delay is impracticable, unnecessary, or contrary to the public interest, and incorporates a statement of the finding and the reasons in the rule issued under 5 U.S.C. 553(d)(3) and 5 U.S.C. 808(2).

The Secretary finds that good cause exists to make certain regulatory provisions effective upon publication in the **Federal Register**.

Our revisions to § 495.6(f) and (g) change certain criteria for meaningful use beginning with FY 2013. Some eligible hospitals and CAHs will begin their EHR reporting period using the criteria under § 495.6(f) and (g)

beginning October 1, 2012. All of these changes are optional and are meant to provide greater flexibility in meeting these criteria. Because these revisions relieve a restriction on eligible hospitals and CAHs, a waiver of the delayed effective date is in order. It is both unnecessary to delay the effective date, and in the public's best interest to waive the delay in effective date for these changes. Furthermore, ensuring that these provisions are effective beginning with FY 2013 would mitigate any disadvantage experienced by eligible hospitals and CAHs beginning their EHR reporting periods at the beginning of the fiscal year, because it would allow them to use these revised criteria at the beginning of such period. Our revisions to § 495.6(f) include eliminating the reporting of clinical quality measures as a separate objective of meaningful use and instead including this reporting requirement as part of the definition of ''meaningful EHR user'' under § 495.4. Accordingly, the delayed effective date must also be waived with regard to the definition of ''meaningful EHR user'' under § 495.4 and the revisions to § 495.8. To allow these provisions to take effect with the beginning of FY 2013, it is impracticable to delay the effective date, which would occur after the beginning of the fiscal year.

We have also made a technical correction to § 495.102(c) so that it correctly reflects the policy we adopted in the Stage 1 final rule for EPs who predominantly furnish services in a geographic HPSA. This change is technical in nature and merely codifies our existing policy. Retaining current regulatory language would allow an error to persist. Therefore, it is unnecessary, impracticable, and contrary to the public interest to delay the effective date of this codification.

We are also waiving the delay in effective date for all of the changes we are making to subpart D of part 495. Some of these changes either codify or more clearly specify already existing policy (deletions of § 495.310(a)(1)(ii), § 495.310(a)(2)(ii), and § 495.332(d)(9) to reflect the existing policy on net average allowable cost under the Medicare and Medicaid Extenders Act of 2010; changes to § 495.310(g) to clarify that the rules are for ''acute-care inpatient discharges'' and ''acute care inpatient bed-days''; changes to § 495.310 to clarify policy on hospitals switching states). Therefore, it is unnecessary, impracticable, and contrary to the public interest to delay the effective date of these provisions as they are already in effect as CMS policies.

Others of these changes merely provide states or eligible providers with additional flexibility to adopt policies that will be of benefit to the states or providers, thus relieving a restriction (§ 495.302 change in definition for children's hospital and practices predominantly; § 495.304 regarding allowing EPs and eligible hospitals to include individuals enrolled in a Medicaid program in 2013; changes to § 495.306 regarding additional flexibility for determining patient volume in 2013; changes to § 495.312 and § 495.332(c) and (g) and § 495.370 regarding additional options for states in conducting audits and appeals of eligible hospitals' meaningful use; and changes to § 495.342 adding flexibility on submission of the HIT IAPD). These changes will be in the public interest of states or eligible providers or both, because they provide additional flexibility allowing states to relieve their burdens, or allowing additional providers to qualify for Medicaid incentives under the program. It is important that these changes be in place as soon as possible, and especially as of October 1, 2012 for eligible hospitals beginning their fiscal years. Therefore, a waiver in the delay in the effective date is both impracticable and contrary to the public interest, and the Secretary finds good cause not to delay the effective date of these provisions.

The final change to subpart D (in § 495.304(f) and § 495.332(b)(6)) applies to EPs, who will not begin payment year 2013 until the beginning of the calendar year in any case. However, in the interest of ensuring that states have a reasonable opportunity to amend their SMHPs and to ensure consistency in effective date for the entire subpart it is in the public interest to waive the delay in effective date for these changes as well. Again, the effect on EPs would not take place until January of 2013 in any case—well after a 60-day delay has occurred.

For all these reasons, we believe that a 60-day delay in the effective date of the previously discussed provisions would be unnecessary, impracticable, and contrary to the public interest. Therefore, we find good cause for waiving the 60-day delay in the effective date for these provisions and making the provisions effective upon publication.

IV. Collection of Information Requirements

Under the Paperwork Reduction Act of 1995, we are required to provide 30-day notice in the **Federal Register** and solicit public comment before a collection of information requirement is submitted to the Office of Management and Budget (OMB) for review and approval. In order to fairly evaluate whether an information collection should be approved by OMB, section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 requires that we solicit comment on the following issues:

- The need for the information collection and its usefulness in carrying out the proper functions of our agency.
- The accuracy of our estimate of the information collection burden.
- The quality, utility, and clarity of the information to be collected.
- Recommendations to minimize the information collection burden on the affected public, including automated collection techniques.

The following is a discussion of the requirements we believe are subject to the PRA and collection of information requirements (ICRs) as a result of this final rule. This analysis finalizes our projections which were proposed in the March 7, 2012 **Federal Register** (77 FR 13790 through 13800) in which we proposed a revision to the existing PRA package approved under OMB control number 0938–1158. The projected numbers of EPs, eligible hospitals, CAHs, MA organizations, MA EPs, and MA-affiliated hospitals are based on the numbers used in the impact analysis assumptions as well as estimated federal costs and savings in section V. of this final rule. The actual burden will remain constant for all of Stage 2 as EPs, eligible hospitals, and CAHs will only need to attest that they have successfully demonstrated meaningful use one time per year. The only variable from year to year in Stage 2 will be the number of respondents, as noted in the impact analysis assumptions. For the purposes of this analysis, we are focusing only on 2014, the first year in which a provider may participate in Stage 2 of the Medicare EHR Incentive Program. We do not believe the burden for EPs, eligible hospitals, and CAHs participating in Stage 1 prior to 2014 will be different from the agency information collection activities (75 FR 65354) based on this final rule. Beginning in 2012, Medicare EPs, eligible hospitals, and CAHs have the option to electronically report their clinical quality measures through the respective electronic reporting pilots. The burden for the EP pilot is discussed in the CY 2012 Medicare PFS final rule with comment period (76 FR 73450 through 73451). For eligible hospitals and CAHs, the burden is discussed in the CY 2012 OPPS final rule with comment period (76 FR 74489 through 74492).

A. ICR Regarding Demonstration of Meaningful Use Criteria (§ 495.6 and § 495.8)

In § 495.6 of the proposed rule, we proposed that to successfully demonstrate meaningful use of CEHRT for Stage 2, an EP, eligible hospital or CAH (collectively referred to as ''provider'' in this section) must attest, through a secure mechanism in a specified manner, to the following during the EHR reporting period: (1) The provider used CEHRT and specified the technology was used; and (2) the provider satisfied each of the applicable objectives and associated measures in § 495.6. In § 495.8, we proposed that a provider must also successfully report the clinical quality measures selected by CMS to CMS or the states, as applicable. We assumed that the CEHRT adopted by the provider would capture many of the objectives and associated measures and generate automated numerator and denominator information where required, or generate automated summary reports. We also expect that the provider would enable the functionality required to complete the objectives and associated measures that require the provider to attest that they have done so.

We proposed that EPs would be required to report on a total of 17 core objectives and associated measures, 3 of 5 menu set objectives and associated measures, and 12 ambulatory clinical quality measures. We estimated the total average annual cost burden for all 198,912 nonhospital-based EPs who may attest in 2014 to be $186,098,885 (198,912 EPs × 10 hours 24 minutes × $89.96 (mean hourly rate for physicians based on May 2010 Bureau of Labor Statistics (BLS) data)). We proposed that eligible hospitals and CAHs would be required to report on a total of 16 core objectives and associated measures, 2 of the 4 menu set objectives and associated measures, and 24 clinical quality measures. We estimated the total annual cost burden for all eligible hospitals and CAHs to attest to EHR technology, meaningful use core set and menu set criteria, and electronically submit the clinical quality measures would be $2,375,564 (4,993 eligible hospitals and CAHs × $62.23 (12 hours 14 minutes × $62.23 (mean hourly rate for lawyers based on May 2010 BLS) data)).

Comment: A commenter suggested CMS account for Web site responsiveness when estimating the burden for providers as they enter attestation data. The commenter noted that the Web site would take several minutes after entering data until the next page would become available.

Response: We cannot forecast technical difficulties with our Web sites, but strive to maintain a high level of responsiveness.

Comment: Some commenters suggested CMS underestimated the amount of time it takes providers to attest that they have successfully demonstrated meaningful use. They noted that providers see attestation as more than just reporting their data at the end of the reporting period, rather, a process that is continuously monitored throughout that time. Others noted that the operational burden that providers encounter on a per-patient basis will increase significantly in Stage 2.

Response: We appreciate the public comments on this burden analysis. However, this analysis specifically reflects the amount of time we estimate providers will take to prepare and report their meaningful use data through the Medicare and Medicaid EHR Incentive Programs Registration and Attestation System. We cannot account for individual providers' workflows or training needs to participate in these programs.

After consideration of the public comments received, we are finalizing these burden estimates as proposed but have updated them to reflect policy changes implemented through this final rule.

In this final rule, there are 13 core objectives and up to 3 menu set objectives that will require an EP to enter numerators and denominators during attestation. Eligible hospitals and CAHs will have to attest they have met 10 core objectives and 3 menu set objectives that require numerators and denominators. For objectives and associated measures requiring a numerator and denominator, we limit our estimates to actions taken in the presence of CEHRT. We do not anticipate a provider will maintain two recordkeeping systems when CEHRT is present. Therefore, we assume that all patient records that will be counted in the denominator will be kept using certified EHR technology. We expect it will take an individual provider or their designee approximately 10 minutes to attest to each meaningful use objective and associated measure that requires a numerator and denominator to be generated, as well as each CQM for providers attesting in their first year of the program.

Additionally, providers will be required to report they have completed objectives and associated measures that require a ''yes'' or ''no'' response during attestation. For EPs, there are 3 core objectives and up to 3 menu set objectives that will require a ''yes'' or ''no'' response during attestation. For eligible hospitals and CAHs, there are 5 core objectives and that will require a ''yes'' or ''no'' response during attestation and no such menu set objectives. We expect that it will take a provider or their designee 1 minute to attest to each objective that requires a ''yes'' or ''no'' response.

Providers will also be required to attest that they are protecting electronic health information. We estimate completion of the analysis required to successfully meet the associated measure for this objective will take approximately 6 hours, which is identical to our estimate for the Stage 1 requirement. This burden estimate assumes that covered entities are already conducting and reviewing these risk analyses under current HIPAA regulations. Therefore, we have not accounted for the additional burden associated with the conduct or review of such analyses.

Table 20 lists those objectives and associated measures for EPs, eligible hospitals and CAHs. We estimate the core set of objectives and associated measures will take an EP 8 hours and 13 minutes to complete, and will take an eligible hospital or CAH 7 hours and 45 minutes to complete. For EPs, we estimate the completion of 3 menu set objectives and associated measures will take between 3 minutes and 30 minutes to complete, depending on the combination of objectives they choose to attest to. We estimate the selection, preparation, and electronic submission of the 9 ambulatory clinical quality measures will take EPs 1 hour and 30 minutes. We estimate it will take eligible hospitals and CAHs 30 minutes to attest to the 3 menu set objectives they choose. For eligible hospitals and CAHs, we estimate the selection, preparation, and electronic submission of 16 required clinical quality measures will take 2 hours and 40 minutes.

TABLE 20—BURDEN ESTIMATES

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
CORE SET				
Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.	Use computerized provider order entry (CPOE) for medication, laboratory and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per state, local and professional guidelines.	More than 60% of medication, 30% of laboratory, and 30% of radiology orders created by the EP or authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using CPOE.	10 minutes	10 minutes.
Generate and transmit permissible prescriptions electronically (eRx).	.....	More than 50% of all permissible prescriptions, or all prescriptions written by the EP and queried for a drug formulary and transmitted electronically using CEHRT.	10 minutes.	
Record the following demographics. • Preferred language • Sex • Race • Ethnicity • Date of birth	Record the following demographics. • Preferred language • Sex • Race • Ethnicity • Date of birth • Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) have demographics recorded as structured data.	10 minutes	10 minutes.
Record and chart changes in vital signs:. • Height/length • Weight • Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0–20 years, including BMI	Record and chart changes in vital signs:. • Height/length • Weight • Blood pressure (age 3 and over) • Calculate and display BMI • Plot and display growth charts for patients 0–20 years, including BMI	More than 80% of all unique patients seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.	10 minutes	10 minutes.
Record smoking status for patients 13 years old or older.	Record smoking status for patients 13 years old or older.	More than 80% of all unique patients 13 years old or older seen by the EP or admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) have smoking status recorded as structured data.	10 minutes	10 minutes.
Use clinical decision support to improve performance on high-priority health conditions.	Use clinical decision support to improve performance on high-priority health conditions.	1. Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in care for the entire EHR reporting period. Absent four clinical quality measures related to an EP, eligible hospital or CAH's scope of practice or patient population, the clinical decision support interventions must be related to improving healthcare efficiency.		

TABLE 20—BURDEN ESTIMATES—Continued

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
.....	.....	2. The EP, eligible hospital or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.	1 minute	1 minute.
Incorporate clinical lab-test results as structured data.	Incorporate clinical lab-test results as structured data.	More than 55% of all clinical lab tests results ordered by the EP or by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative affirmation or numerical format are incorporated in CEHRT as structured data.	10 minutes	10 minutes.
Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.	Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.	Generate at least one report listing patients of the EP, eligible hospital or CAH with a specific condition.	1 minute	1 minute.
Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care and send these patients the reminder, per patient preference.	.....	More than 10% of all unique patients who have had two or more office visits with the EP within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference when available.	10 minutes.	
	Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).	More than 10% of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR.	.....	10 minutes.
Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.	.....	1. More than 50% of all unique patients seen by the EP during the EHR reporting period are provided timely (within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information. 2. More than 5% of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download, or transmit to a third party their health information.	10 minutes.	

TABLE 20—BURDEN ESTIMATES—Continued

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
	Provide patients the ability to view online, download, and transmit information about a hospital admission.	1. More than 50% of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge. 2. More than 5% of all patients (or their authorized representatives) who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH view, download or transmit to a third party their information during the reporting period.	.....	10 minutes.
Provide clinical summaries for patients for each office visit.	.....	Clinical summaries provided to patients or patient-authorized representatives within 1 business day for more than 50% of office visits.	10 minutes.	
Use CEHRT to identify patient-specific education resources and provide those resources to the patient.	Use CEHRT to identify patient-specific education resources and provide those resources to the patient.	Patient-specific education resources identified by CEHRT are provided to patients for more than 10% of all unique patients with office visits seen by the EP during the EHR reporting period. More than 10% of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency departments (POS 21 or 23) are provided patient-specific education resources identified by CEHRT.	10 minutes	10 minutes.
Use secure electronic messaging to communicate with patients on relevant health information.	.....	A secure message was sent using the electronic messaging function of CEHRT by more than 5% of unique patients (or their authorized representatives) seen by the EP during the EHR reporting period.	10 minutes.	
The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.	The eligible hospital or CAH who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.	The EP, eligible hospital or CAH performs medication reconciliation for more than 50% of transitions of care in which the patient is transitioned into the care of the EP or admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).	10 minutes	10 minutes.

TABLE 20—BURDEN ESTIMATES—Continued

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.	The eligible hospital or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.	1. The EP, eligible hospital, or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50% of transitions of care and referrals. 2. The EP, eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 10% of such transitions and referrals either (a) electronically transmitted using CEHRT to a recipient or (b) where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network. 3. An EP, eligible hospital or CAH must satisfy one of the two following criteria: (A) conducts one or more successful electronic exchanges of a summary of care document, as part of which is counted in ''measure 2'' (for EPs the measure at § 495.6(j)(14)(ii)(B) and for eligible hospitals and CAHs the measure at § 495.6(l)(11)(ii)(B)) with a recipient who has EHR technology that was developed designed by a different EHR technology developer than the sender's EHR technology certified to 45 CFR 170.314(b)(2).	10 minutes	10 minutes.
Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.	Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic immunization data from CEHRT to an immunization registry or immunization information system for the entire EHR reporting period.	1 minute	1 minute.
	Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic reportable laboratory results from CEHRT to public health agencies for the entire EHR reporting period.	.....	1 minute.
	Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.	Successful ongoing submission of electronic syndromic surveillance data from CEHRT to a public health agency for the entire EHR reporting period.	.....	1 minute.

TABLE 20—BURDEN ESTIMATES—Continued

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
Protect electronic health information created or maintained by the CEHRT through the implementation of appropriate technical capabilities.	Protect electronic health information created or maintained by the CEHRT through the implementation of appropriate technical capabilities.	Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in CEHRT in accordance with requirements under 45 CFR 164.312 (a)(2)(iv) and 45 CFR 164.306 (d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the provider's risk management process.	6 hours	6 hours.
Core Set Burden			8 hours 13 minutes ...	7 hours 45 minutes.
MENU SET				
	Record whether a patient 65 years old or older has an advance directive.	More than 50% of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period have an indication of an advance directive status recorded as structured data.	.....	10 minutes.
Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through CEHRT.	Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through CEHRT.	More than 10% of all tests whose result is one or moreimages ordered by the EP or by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 and 23) during the EHR reporting period are accessible through CEHRT.	10 minutes	10 minutes.
Record patient family health history as structured data.	Record patient family health history as structured data.	More than 20% of all unique patients seen by the EP or admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.	10 minutes	10 minutes.
	Generate and transmit permissible discharge prescriptions electronically (eRx).	More than 10% of hospital discharge medication orders for permissible prescriptions (for new, changed, and refilled prescriptions) are queried for a drug formulary and transmitted electronically using CEHRT.	.....	10 minutes

TABLE 20—BURDEN ESTIMATES—Continued

Eligible professionals	Eligible hospitals and CAHs	Stage 2 measures	Burden estimate per respondent (EPs)	Burden estimate per respondent (hospitals)
Record electronic notes in patient records.	Record electronic notes in patient records.	Enter at least one electronic progress note created, edited, and signed by an eligible professional for more than 30 percent of unique patients with at least one office visit during the EHR reporting period. Enter at least one electronic progress note created, edited and signed by an authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) for more than 30 percent of unique patients admitted to the eligible hospital or CAH's inpatient or emergency department during the EHR reporting period. Electronic progress notes must be text-searchable. Nonsearchable, notes do not qualify, but this does not mean that all of the content has to be character text. Drawings and other content can be included with searchable notes under this measure.	10 minutes	10 minutes.
	Provide structured electronic lab results to ambulatory providers.	Hospital labs send structured electronic clinical lab results to the ordering provider for more than 20% of electronic lab orders received.		10 minutes
Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.		Successful ongoing submission of electronic syndromic surveillance data from CEHRT to a public health agency for the entire EHR reporting period.	1 minute.	
Capability to identify and report cancer cases to a public health central cancer registry, except where prohibited, and in accordance with applicable law and practice.		Successful ongoing submission of cancer case information from CEHRT to a public health central cancer registry for the entire EHR reporting period.	1 minute.	
Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.		Successful ongoing submission of specific case information from CEHRT to a specialized registry for the entire EHR reporting period.	1 minute.	
Menu Set Least Burdensome Criteria			3 minutes.	
Menu Set Most Burdensome Criteria			30 minutes	30 minutes.
Time to Attest and Report Clinical Quality Measures			1 hour 30 minutes	2 hours 40 minutes.
Total—Core Set (including CQMs) + Least Burdensome Menu Set Criteria			9 hours 46 minutes.	
Total—Core Set (including CQMs) + Most Burdensome Menu Set Criteria			10 hours 13 minutes.	10 hours 55 minutes.

First, we will discuss the burden associated with the EP attestation to meeting the core meaningful use objectives and associated measures. We estimate that it will take no longer than 8 hours and 13 minutes to attest that

during the EHR reporting period, they used the CEHRT, specify the EHR technology used, and satisfy each of the applicable core objectives and associated measures. We estimate it will take an EP 30 minutes if they choose to submit the most burdensome objectives and associated measures from the menu set. If an EP chooses to attest to the least burdensome menu set objectives and associated measures, we estimate this will take approximately 3 minutes. We also estimate that it will take an EP an additional 1 hour and 30 minutes to select, prepare, and electronically submit the ambulatory clinical quality measures. The total burden hours for an EP to attest to the most burdensome criteria previously specified is 10 hours and 13 minutes. The total burden hours for an EP to attest to the least burdensome criteria previously specified is 9 hours and 46 minutes. We estimate that there could be approximately 537,600 nonhospital-based Medicare and Medicaid EPs in 2014. We anticipate approximately 37 percent (198,912) of these EPs may attest to the information previously specified (after registration and completion of Stage 1) in CY 2014 to receive an incentive payment. We estimate the burden for the approximately 13,000 MA EPs in the MAO burden section. We estimate the total burden associated with these requirements for an EP is 10 hours and 13 minutes (8 hours 13 minutes + 30 minutes + 1 hour 30 minutes). The total estimated annual cost burden for all EPs to attest to EHR technology, meaningful use core set and most burdensome menu set criteria, and electronically submit the ambulatory clinical quality measures is $182,877,942 (198,912 EPs × 10 hours 13 minutes × $89.96 (mean hourly rate for physicians based on May 2010 Bureau of Labor Statistics (BLS) data)). We estimate the total burden associated with these requirements for an EP is 9 hours and 46 minutes (8 hours 13 minutes + 3 minutes + 1 hour 30 minutes). The total estimated cost burden for all EPs to attest to EHR technology, meaningful use core set and least burdensome menu set criteria, and electronically submit the ambulatory clinical quality measures is $174,825,587 (198,912 EPs × 9 hours 46 minutes × $89.96 (mean hourly rate for physicians based on May 2010 BLS data)).

Similarly, eligible hospitals and CAHs will attest that they have met the core meaningful use objectives and associated measures, and will electronically submit the clinical quality measures. We estimate that it will take no longer than 7 hours and 45 minutes to attest that during the EHR reporting period, they used the CEHRT, specify the EHR technology used, and satisfied each of the applicable core objectives and associated measures. We estimate it will take an eligible hospital or CAH 30 minutes to choose and submit the objectives and associated measures from the menu set. We also estimate that it will take an eligible hospital or CAH an additional 2 hours and 40 minutes to select, prepare, and electronically submit the clinical quality measures. Therefore, the total burden hours for an eligible hospital or CAH to attest to the aforementioned criteria is 10 hours, 55 minutes. We estimate that there are about 4,993 eligible hospitals and CAHs (3,573 acute care hospitals, 1,325 CAHs, 84 children's hospitals, and 11 cancer hospitals) that may attest to the aforementioned criteria (after registration and completion of Stage 1) in FY 2014 to receive an incentive payment. We estimate the burden for the 30 MA-affiliated hospitals in section III.B. of this final rule. We estimate the total burden associated with these requirements for an eligible hospital or CAH is 10 hours and 55 minutes (7 hours 45 minutes + 30 minutes + 2 hours 40 minutes). The total estimated annual cost burden for all eligible hospitals and CAHs to attest to EHR technology, meaningful use core set and menu set criteria, and electronically submit the clinical quality measures is $2,069,061 (4,993 eligible hospitals and CAHs × $62.23 (11 hours 4 minutes × $62.23 (mean hourly rate for lawyers based on May 2010 BLS) data)).

B. ICRs Regarding Qualifying MA Organizations (§ 495.210)

We estimate that the burden will be significantly less for qualifying MA organizations attesting to the meaningful use of their MA EPs in Stage 2, because—(1) qualifying MA organizations do not have to report the ambulatory clinical quality measures for their qualifying MA EPs; and (2) qualifying MA EPs use the EHR technology in place at a given location or system, so if CEHRT is in place and the qualifying MA organization requires its qualifying MA EPs to use the technology, qualifying MA organizations will be able to determine at a faster rate than individual FFS EPs, that its qualifying MA EPs meaningfully used CEHRT. In other words, qualifying MA organizations can make the determination en masse if the CEHRT is required to be used at its facilities, whereas under FFS, each EP likely must make the determination on an individual basis. We estimate that, on average, it will take an individual 45 minutes to collect information necessary to determine if a given qualifying MA EP has met the meaningful use objectives and measures, and 15 minutes for an individual to make the attestation for each MA EP. Furthermore, the individuals performing the assessment and attesting will not likely be eligible professionals, but non-clinical staff. We believe that the individual gathering the information could be equivalent to a GS 9, step 1, with an hourly rate of approximately $25.00/hour, and the person attesting (and who may bind the qualifying MA organization based on the attestation) could be equivalent to a GS 15, step 1, or approximately $59.00/hour. Therefore, for the approximately 13,000 potentially qualifying MA EPs, we believe it will cost the participating qualifying MA organizations approximately $435,500 annually to make the attestations ([9,750 hours × $25.00] + [3,250 hours × $59.00]).

Furthermore, MA-affiliated eligible hospitals will be able to complete the attestations slightly faster than eligible hospitals because MA-affiliated eligible hospitals do not have to report the hospital clinical quality measures. While it is estimated that it will take an eligible hospital or CAH approximately between 16 hours, 24 minutes and 16 hours, 33 minutes to attest to the applicable meaningful use objectives and associated measures, 8 of those hours are attributed to reporting clinical quality measures, which MA organizations do not have to report. Therefore, we estimate that it will take between 8 hours, 24 minutes and 8 hours, 33 minutes (which on average is 8 hours 29 minutes) for an MA organization's MA-affiliated eligible hospitals to make the attestations. We believe that the individual gathering the information could be equivalent to a GS 9, step 1, with an hourly rate of approximately $25.00/hour, and the person attesting (and who may bind the qualifying MA organization based on the attestation) could be equivalent to a GS 15, step 1, or approximately $59.00/hour. We believe that the person gathering the information could dedicate 7 of the estimated hours to gathering the information, and the individual certifying could take 1 hour and 29 minutes of the estimated time. Therefore, for the approximately 30 potentially qualifying MA-affiliated eligible hospitals, we believe it will cost the participating qualifying MA organizations in the aggregate approximately $7,870 annually to

successfully attest ([210 hrs × $25.00] + [44 hrs × $59.00]).

We did not receive any comments and we are finalizing these estimates as proposed.

C. ICRs Regarding State Medicaid Agency and Medicaid EP and Hospital Activities (§ 495.332 Through § 495.344)

The burden associated with this section is the time and effort associated with completing the single provider election repository and each state's process for the administration of the Medicaid incentive payments, including tracking of attestations and oversight; the submission of the state Medicaid HIT Plan and the additional planning and implementation documents; enrollment or reenrollment of providers, and collection and submission of the data for providers to demonstrate that they have adopted, implemented, or upgraded CEHRT or that they are meaningful users of such technology. We believe the burden associated with these requirements has already been accounted for in our discussion of the burden for § 495.316 in the Stage 1 final rule. However, we proposed to revise 42 CFR 495 regarding the frequency of HIT IAPD updates. Rather than requiring each state to submit an annual HIT IAPD within 60 days from the HIT IAPD approved anniversary date, we proposed to require that a state's annual IAPD or IAPD Update (IAPD–U) be submitted at a minimum of 12 months from the date of the last CMS approval. We are finalizing our proposed revision to 42 CFR 495; therefore, annual IAPD updates are only required if a state has not submitted an IAPD–U in the past 12 months, which will create less of a burden on the states. We expect that it will take a state 70 hours to update an annual IAPD. We believe that the requirement for states to agree to have CMS conduct audits and appeals for hospitals for meaningful use will reduce state burden, as they will not conduct their own audits. Also, the alternatives for calculating patient volume will alleviate state burden as patient volume will be more easily calculated.

We did not receive any comments and we are finalizing these estimates as proposed.

TABLE 21—ESTIMATED ANNUAL REPORTING AND RECORDKEEPING REQUIREMENTS

Reg section	OMB Control No.	Number of respondents	Number of responses	Burden per response (hours)	Total annual burden (hours)	Hourly labor cost of reporting ($)	Total cost ($)
§ 495.6—EHR Technology Used, Core Set Objectives/Measures (EPs)	???-New	198,912	198,912	8.22	1,635,057	89.96	147,089,695.33
§ 495.6—Menu Set Objectives/Measures (EPs) HIGH	???-New	198,912	198,912	0.50	99,456	89.96	8,947,061.76
§ 495.6—Menu Set Objectives/Measures (EPs) LOW	???-New	198,912	198,912	0.05	9,946	89.96	894,706.18
§ 495.6—Menu Set Objectives/Measures (EPs) AVERAGE	???-New	198,912	198,912	0.28	54,701	89.96	4,920,883.97
§ 495.8—CQMs for EPs	???-New	198,912	198,912	1.50	298,368	89.96	26,841,185.28
§ 495.6—EHR Technology Used, Core Set Objectives/Measures (hospitals/CAHs)	???-New	2,696	2,696	7.75	20,894	62.23	1,300,233.62
§ 495.6—Menu Set Objectives/Measures (hospitals/CAHs)	???-New	2,696	2,696	0.50	1,348	89.96	121,266.08
§ 495.8—CQMs for hospitals/CAHs	???-New	2,696	2,696	2.67	7,198	89.96	647,560.87
§ 495.210—Gather information for attestation (MA EPs)	???-New	13,000	13,000	0.75	9,750	25.00	243,750.00
§ 495.210—Attesting on behalf of MA EPs	???-New	13,000	13,000	0.25	3,250	59.00	191,750.00
§ 495.210—Total cost of attestation for Stage 2 (MA EPs)	???-New	13,000	13,000	1.00	13,000	n/a	435,500.00
§ 495.210—Gather information for attestation (MA-affiliated hospitals)	???-New	30	30	7.00	210	25.00	5,250.00

TABLE 21—ESTIMATED ANNUAL REPORTING AND RECORDKEEPING REQUIREMENTS—Continued

Reg section	OMB Control No.	Number of respondents	Number of responses	Burden per response (hours)	Total annual burden (hours)	Hourly labor cost of reporting ($)	Total cost ($)
§ 495.210—Attesting on behalf of MA-affiliated hospitals	???-New	30	30	1.48	44	59.00	2,619.60
§ 495.210—Total cost of attestation for Stage 2 (MA-affiliated hospitals)	???-New	30	30	8.48	254	n/a	7,869.60
§ 495.342–1. Frequency of Health Information Technology (HIT) Implementation Advanced Planning Document (IAPD) Updates	???-New	56	56	70.00	3,920	56.24	220,460.80
Burden Total for 2014					2,034,740.16		181,584,656

Note: All nonwhole numbers in this table are rounded to 2 decimal places.

If you would like to comment on these information collection and recordkeeping requirements, submit your comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: CMS Desk Officer, [CMS–0044–F], Fax: (202) 395–6974; or Email: *OIRA_submission@omb.eop.gov*.

V. Regulatory Impact Analysis

A. Statement of Need

This final rule will implement the provisions of the ARRA that provide incentive payments to EPs, eligible hospitals, and CAHs participating in Medicare and Medicaid programs that adopt and meaningfully use CEHRT. The final rule specifies applicable criteria for earning incentives and avoiding payment adjustments.

B. Overall Impact

We have examined the impacts of this rule as required by Executive Order 12866 on Regulatory Planning and Review (September 30, 1993), Executive Order 13563 on Improving Regulation and Regulatory Review (January 18, 2011), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96–354), section 1102(b) of the Social Security Act, section 202 of the Unfunded Mandates Reform Act of 1995 (March 22, 1995; Pub. L. 104–4), Executive Order 13132 on Federalism (August 4, 1999) and the Congressional Review Act (5 U.S.C. 804(2)).

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for major rules with economically significant effects ($100 million or more in any 1 year). This final rule is anticipated to have an annual effect on the economy of $100 million or more, making it an economically significant rule under the Executive Order and a major rule under the Congressional Review Act. Accordingly, we have prepared a Regulatory Impact Analysis that to the best of our ability presents the costs and benefits of the final rule.

As noted in section I. of this final rule, this final rule is one of two coordinated rules related to the adoption and meaningful use of CEHRT. The other is ONC's final rule, titled ''Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition; Revisions to the Permanent Certification Program for Health Information Technology'' published elsewhere in this **Federal Register**. This analysis focuses on the impact associated with Stage 1 meaningful use participation in 2014, Stage 2 requirements for meaningful use, the changes in quality measures that will take effect beginning in 2014, and other changes in the Medicare and Medicaid EHR Incentive Programs.

A number of factors will affect the adoption of EHR systems and demonstration of meaningful use. Many of these factors are addressed in this analysis and in the provisions of the final rule titled ''Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition; Revisions to the Permanent Certification Program for Health Information Technology'' published elsewhere in this **Federal Register**. Readers should understand that these forecasts are also subject to substantial uncertainty since demonstration of meaningful use will depend not only on the standards and requirements for FYs 2014 and 2015 for eligible hospitals and CYs 2014 and 2015 for EPs, but on future rulemakings issued by the HHS.

The Act provides Medicare and Medicaid incentive payments for the meaningful use of CEHRT. Additionally, the Medicaid program also provides incentives for the adoption, implementation, and upgrade of CEHRT. Payment adjustments are incorporated into the Medicare program for providers unable to demonstrate meaningful use. The absolute and relative strength of these is unclear. For example, a provider with relatively small Medicare billings will be less disadvantaged by payment adjustments than one with relatively large Medicare billings. Another uncertainty arises because there are likely to be ''bandwagon'' effects as the number of providers using EHRs rises, thereby inducing more participation in the

incentives program, as well as greater adoption by entities (for example, clinical laboratories) that are not eligible for incentives or subject to payment adjustments, but do business with EHR adopters. It is impossible to predict exactly if and when such effects may take hold.

One legislative uncertainty arises because under current law, physicians are scheduled for payment reductions under the sustainable growth rate (SGR) formula for determining Medicare payments. The current override of SGR payment reductions prevents any further reductions of Medicare physician payments throughout the rest of 2012. Any payment reductions implemented in CY 2013 and subsequent calendar years could cause major changes in physician behavior, enrollee care, and other Medicare provider payments, but the specific nature of these changes is exceptionally uncertain. Under a current law scenario, the EHR incentives or payment adjustments will exert only a minor influence on physician behavior relative to any large payment reductions. However, the Congress has legislatively avoided physician payment reductions for each year since 2002.

All of these factors taken together make it difficult to predict with precision the timing or rates of adoption and ultimately meaningful use. Further, new data regarding rates of adoption or costs of implementation is just starting to emerge. Because of this continued uncertainty, these estimates for adoption rates should be used with caution. Our estimate of meaningful use demonstration assumes that by 2019 nearly 100 percent of hospitals and nearly 70 percent of EPs will be meaningful users. This estimate is based on the substantial economic incentives created by the combined direct and indirect factors affecting providers.

Data from the EHR Incentive Program to date has shown that about 12 percent of EPs and 8 percent of hospitals received incentive payments in 2011, the first year. This may be because providers have taken a ''wait and see approach'' in the first year of implementation or that they have had problems receiving certified systems. Two thousand eleven was the first year of the program and saw initially slow, but rapidly accelerating, growth in qualification for and payment of meaningful use incentives. Given that this is very early data, and given the differences between Stage 1 and Stage 2 requirements, this data only indicates preliminary penetration rates.

Overall, we expect spending under the EHR incentive program for transfer payments to Medicare and Medicaid providers between 2014 and 2019 to be $15.4 billion (these estimates include payment adjustments for Medicare providers who do not achieve meaningful use in 2015 and subsequent years in the amount of $2.1 billion). We have also estimated ''per entity'' costs for EPs, eligible hospitals, and CAHs for implementation/maintenance and reporting requirement costs, not all costs. We believe also that adopting entities will achieve dollar savings at least equal to their total costs, and that there will be additional benefits to society. We believe that implementation costs are significant for each participating entity because providers must purchase CEHRT to qualify as meaningful users of EHRs. However, we believe that providers who have already purchased CEHRT and participated in Stage 1 of meaningful use will experience significantly lower costs for participation in the program. We continue to believe that the short-term costs to demonstrate meaningful use of CEHRT are outweighed by the long-term benefits, including practice efficiencies and improvements in medical outcomes. Although both cost and benefit estimates are highly uncertain, the RIA that we have prepared to the best of our ability presents the costs and benefits of this final rule.

Previously, the Stage 2 proposed rule and the Stage 1 final rule impact analyses showed two plausible scenarios for program costs. In this RIA, we are showing a scenario based on the FY 2013 Mid-Session Review of the President's budget. The estimates are based on the limited actual historical data that is now available for the EHR Incentive Programs. The new projections differ somewhat from the two scenarios presented previously. The major reasons for the differences are different assumed penetration rates based on more recent data and analysis, and revised assumptions as to the timing of payments in relation to when meaningful use is achieved based on the actual experience of the programs to date. When compared with the two illustrations from the Stage 2 proposed rule and Stage 1 final rule, the penetration rates for the current estimates are generally closer to those in the high cost scenario. In general, the actual program experience, which is included in the new estimates, showed somewhat lower payments early in the first year, and somewhat higher payments towards the end of the first year than assumed in the two previously-used scenarios. The accounting statement numbers under the 7-percent discount for the two scenarios from the previous estimates were $706 million and $2,346 million. The current accounting statement number under the 7-percent discount is $2,558 million. The current projections, while based on more up-to-date information, are still very uncertain and actual future outcomes are likely to differ somewhat from these projections.

Comment: A commenter suggested that the impact analysis should only address Stage 2 of the EHR Incentive Programs.

Response: Although we considered the idea of only addressing Stage 2 in this impact analysis, we do not believe that such an analysis would provide a comprehensive impact of this final rule. This final rule establishes not only Stage 2 criteria but also changes to Stage 1 criteria and both payment adjustments and hardship exceptions that could affect providers at all stages of meaningful use. In addition, providers in all payment years will be at differing stages of meaningful use, and any impact analysis that focused on a single stage would not accurately capture the costs and benefits that accrue from all providers who are participating in the EHR Incentive Programs during a given payment year. Therefore, we include all providers in this impact analysis.

C. Anticipated Effects

The objective of the remainder of this RIA is to summarize the costs and benefits of the HITECH Act incentive program for the Medicare FFS, Medicaid, and MA programs. We also provide assumptions and a narrative addressing the potential costs to the industry for implementation of this technology.

1. Overall Effects

a. Regulatory Flexibility Analysis and Small Entities

The Regulatory Flexibility Act (RFA) requires agencies to prepare a Final Regulatory Flexibility Analysis to describe and analyze the impact of the final rule on small entities unless the Secretary can certify that the regulation will not have a significant impact on a substantial number of small entities. In the healthcare sector, Small Business Administration (SBA) size standards define a small entity as one with between $7 million and $34 million in annual revenues. For the purposes of the RFA, essentially all non-profit organizations are considered small entities, regardless of size. Individuals and states are not included in the definition of a small entity. Since the vast majority of Medicare providers

(well over 90 percent) are small entities within the RFA's definitions, it is the normal practice of HHS simply to assume that all affected providers are ''small'' under the RFA. In this case, most EPs, eligible hospitals, and CAHs are either nonprofit or meet the SBA's size standard for small business. We also believe that the effects of the incentives program on many and probably most of these affected entities will be economically significant. Accordingly, this RIA section, in conjunction with the remainder of the preamble, constitutes the required Regulatory Flexibility Analysis. We believe that the adoption and meaningful use of EHRs will have an impact on virtually every EP and eligible hospital, as well as CAHs and some EPs and hospitals affiliated with MA organizations. While the program is voluntary, in the first 5 years it carries substantial positive incentives that will make it attractive to virtually all eligible entities. Furthermore, entities that do not demonstrate meaningful use of EHR technology for an applicable reporting period will be subject to significant Medicare payment reductions beginning with 2015. The anticipation of these Medicare payment adjustments are expected to motivate EPs, eligible hospitals, and CAHs to adopt and meaningfully use certified EHR technology.

For some EPs, CAHs and eligible hospitals the EHR technology they currently have could be upgraded to meet the criteria for certified EHR technology as defined for this program. These costs may be minimal, involving no more than a software upgrade. ''Home-grown'' EHR systems that might exist may also require an upgrade to meet the certification requirements. We believe many currently noncertified EHR systems will require significant changes to achieve certification and that EPs, CAHs, and eligible hospitals will have to make process changes to achieve meaningful use.

The most recent data available suggests that more providers have adopted EHR technology since the publication of the Stage 1 final rule. A 2011 survey conducted by the ONC and the AHA found that the percentage of U.S. hospitals which had adopted EHRs doubled from 16 to 35 percent between 2009 and 2011. In November 2011, a CDC survey found the percentage of physicians who adopted basic EHRs in their practice had doubled from 17 to 34 percent between 2008 and 2011, with the percent of primary care doctors using this technology nearly doubling from 20 to 39 percent. While these numbers are encouraging, they are still low relative to the overall population of providers. The majority of EPs still need to purchase certified EHR technology, implement this new technology, and train their staff on its use. The costs for implementation and complying with the criteria of meaningful use could lead to higher operational expenses. However, we believe that the combination of payment incentives and long-term overall gains in efficiency will compensate for the initial expenditures.

(1) Number of Small Entities

In total, we estimate that there are approximately 624,000 healthcare organizations (EPs, practices, eligible hospitals or CAHs) that will be affected by the incentive program. These include hospitals and physician practices as well as doctors of medicine or osteopathy, dental surgery or dental medicine, podiatric medicine, optometry or a chiropractor. Additionally, as many as 47,000 nonphysician practitioners (such as certified nurse-midwives, etc) will be eligible to receive the Medicaid incentive payments.

Of the 624,000 healthcare organizations we estimate will be affected by the incentive program, we estimate that 94.71 percent will be EPs, 0.8 percent will be hospitals, and 4.47 percent will be MA organization physicians or hospitals. We further estimate that EPs will spend approximately $54,000 to purchase and implement a certified EHR and $10,000 annually for ongoing maintenance according to the Congressional Budget Office (CBO). In the paper, Evidence on the Costs and Benefits of Health Information Technology, May 2008, in attempting to estimate the total cost of implementing health IT systems in office-based medical practices, recognized the complicating factors of EHR types, available features, and differences in characteristics of the practices that are adopting them. The CBO estimated a cost range of $25,000 to $45,000 per physician. For all eligible hospitals, the range is from $1 million to $100 million. Though reports vary widely, we anticipate that the average will be $5 million to achieve meaningful use. We estimate $1 million for maintenance, upgrades, and training each year.

(2) Conclusion

As discussed later in this analysis, we believe that there are many positive effects of adopting EHR on health care providers, quite apart from the incentive payments to be provided under this rule. While economically significant, we do not believe that the net effect on individual providers will be negative over time except in very rare cases. Accordingly, we believe that the object of the RFA to minimize burden on small entities is met by this rule.

b. Small Rural Hospitals

Section 1102(b) of the Act requires us to prepare a RIA if a rule will have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a metropolitan statistical area and has fewer than 100 beds. This final rule will affect the operations of a substantial number of small rural hospitals because they may be subject to adjusted Medicare payments in 2015 if they fail to adopt certified EHR technology by the applicable reporting period. As stated previously, we have determined that this final rule will create a significant impact on a substantial number of small entities, and have prepared a Regulatory Flexibility Analysis as required by the RFA and, for small rural hospitals, section 1102(b) of the Act. Furthermore, any impacts that will arise from the implementation of certified EHR technology in a rural eligible hospital will be positive, with respect to the streamlining of care and the ease of sharing information with other EPs to avoid delays, duplication, or errors. However, we have statutory authority to make case-by-case exceptions for significant hardship, and proposed certain case-by-case applications that may be made when there are barriers to internet connectivity that will impact health information exchange.

c. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates will require spending in any 1 year $100 million in 1995 dollars, updated annually for inflation. In 2012, that threshold is approximately $139 million. UMRA does not address the total cost of a rule. Rather, it focuses on certain categories of cost, mainly those ''Federal mandate'' costs resulting from—(1) imposing enforceable duties on State, local, or tribal governments, or on the private sector; or (2) increasing the stringency of conditions in, or decreasing the funding of, State, local, or tribal governments under entitlement programs.

This final rule imposes no substantial mandates on States. This program is voluntary for States and States offer the

incentives at their option. The State role in the incentive program is essentially to administer the Medicaid incentive program. While this entails certain procedural responsibilities, these do not involve substantial State expense. In general, each State Medicaid Agency that participates in the incentive program will be required to invest in systems and technology to comply. States will have to identify and educate providers, evaluate their attestations and pay the incentive. However, the Federal government will fund 90 percent of the State's related administrative costs, providing controls on the total State outlay.

The investments needed to meet the meaningful use standards and obtain incentive funding are voluntary, and hence not ''mandates'' within the meaning of the statute. However, the potential reductions in Medicare reimbursement beginning with FY 2015 will have a negative impact on providers that fail to meaningfully use certified EHR technology for the applicable reporting period. We note that we have no discretion as to the amount of those potential payment reductions. Private sector EPs that voluntarily choose not to participate in the program may anticipate potential costs in the aggregate that may exceed $139 million; however, because EPs may choose for various reasons not to participate in the program, we do not have firm data for the percentage of participation within the private sector. This RIA, taken together with the remainder of the preamble, constitutes the analysis required by UMRA.

d. Federalism

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates a final rule that imposes substantial direct requirement costs on State and local governments, preempts State law, or otherwise has Federalism implications. This final rule will not have a substantial direct effect on State or local governments, preempt State law, or otherwise have a Federalism implication. Importantly, State Medicaid agencies are receiving 100 percent match from the Federal government for incentives paid and a 90 percent match for expenses associated with administering the program. As previously stated, we believe that State administrative costs are minimal. We note that this final rule does add a new business requirement for States, because of the existing systems that will need to be modified to track and report on the new meaningful use requirements for provider attestations. We are providing 90 percent FFP to States for modifying their existing EHR Incentive Program systems. We believe the Federal share of the 90 percent match will protect the States from burdensome financial outlays and, as noted previously, States offer the Medicaid EHR incentive program at their option.

2. Effects on Eligible Professionals, Eligible Hospitals, and CAHs

a. Background and Assumptions

The principal costs of this final rule are the additional expenditures that will be undertaken by eligible entities in order to obtain the Medicare and Medicaid incentive payments to adopt, implement or upgrade and/or demonstrate meaningful use of certified EHR technology, and to avoid the Medicare payment adjustments that will ensue if they fail to do so. The estimates for the provisions affecting Medicare and Medicaid EPs, eligible hospitals, and CAHs are somewhat uncertain for several reasons: (1) The program is voluntary although payment adjustments will be imposed on Medicare providers beginning in 2015 if they are unable to demonstrate meaningful use for the applicable reporting period; (2) the Stage 1 and Stage 2 criteria for the demonstration of meaningful use of CEHRT has been finalized, but will change in Stage 3 and over time; and (3) the impact of the financial incentives and payment adjustments on the rate of adoption of certified EHR technology by EPs, eligible hospitals, and CAHs is difficult to predict based on the information we have currently collected. The net costs and savings shown for this program represent a possible scenario and actual impacts could differ substantially.

Based on input from a number of internal and external sources, including the Government Accountability Office (GAO) and CBO, we estimated the numbers of EPs and eligible hospitals, including CAHs under Medicare, Medicaid, and MA and used them throughout the analysis.

- About 568,900 Medicare FFS EPs in 2014 (some of whom will also be Medicaid EPs).
- About 14 percent of the total EPs are hospital-based Medicare EPs, and are not eligible for the program. This leaves approximately 491,000 nonhospital-based Medicare EPs in 2014.
- About 20 percent of the nonhospital-based Medicare EPs (approximately 98,200 Medicare EPs in 2014) are *also* eligible for Medicaid (meet the 30 percent Medicaid patient volume criteria), but can only be paid under one program. We assume that any EP in this situation will choose to receive the Medicaid incentive payment, because it is larger.
- About 46,600 non-Medicare eligible EPs (such as dentists, pediatricians, and eligible nonphysicians such as certified nurse-midwives, nurse practitioners and physicians assistants) will be eligible to receive the Medicaid incentive payments.
- 4,993 eligible hospitals comprised of the following:
  - ++ 3,573 acute care hospitals.
  - ++ 1,325 CAHs.
  - ++ 84 children's hospitals (Medicaid only).
  - ++ 11 cancer hospitals (Medicaid only).
- All eligible hospitals, except for children's and cancer hospitals, may qualify and apply for both Medicare and Medicaid incentive payments.
- 12 MA organizations (about 28,000 EPs, and 29 hospitals) will be eligible for incentive payments.

b. Industry Costs and Adoption Rates

In the Stage 1 final rule (75 FR 44545 through 44547), we estimated the impact on healthcare providers using information from the same four studies cited previously in this final rule. Based on these studies and current average costs for available certified EHR technology products, we continue to estimate for EPs that the average adopt/implement/upgrade cost is $54,000 per physician FTE, while annual maintenance costs average $10,000 per physician FTE.

For all eligible hospitals, the range is from $1 million to $100 million. Although reports vary widely, we anticipate that the average will be $5 million to achieve meaningful use, because providers who will like to qualify as meaningful users of EHRs will need to purchase certified EHRs. We further acknowledge ''certified EHRs'' may differ in many important respects from the EHRs currently in use and may differ in the functionalities they contain. We estimate $1 million for maintenance, upgrades, and training each year. Both of these estimates are based on average figures provided in the 2008 CBO report. Industry costs are important, in part, because EHR adoption rates will be a function of these industry costs and the extent to which the costs of ''certified EHRs'' are higher than the total value of EHR incentive payments available to EPs and eligible hospitals (as well as adjustments, in the case of the Medicare EHR incentive program) and any perceived benefits including societal benefits. Because of the uncertainties surrounding industry cost

estimates, we have made various assumptions about adoption rates in the following analysis in order to estimate the budgetary impact on the Medicare and Medicaid programs.

c. Costs of EHR Adoption for EPs

Since the publication of the Stage 1 final rule, there has been little data published regarding the cost of EHR adoption and implementation. A 2011 study (*http://content.healthaffairs.org/content/30/3/481.abstract*) estimated costs of implementation for a five-physician practice to be $162,000, with $85,500 in maintenance expenses in the first year. These estimates are similar to estimates made in the Stage 1 final rule. In the absence of additional data regarding the cost of adoption and implementation costs for certified EHR technology, we proposed to continue to estimate for EPs that the average adopt/implement/upgrade cost is $54,000 per physician FTE, while annual maintenance costs average $10,000 per physician FTE, based on the cost estimate of the Stage 1 final rule.

Comment: Some commenters suggested that specific costs and financial gains for each provider be recorded as part of attestation to inform the overall impact analysis. Another commenter suggested that the analysis should include costs associated with unintended consequences of the regulation, such as the loss of revenue to providers through the elimination of unnecessary or duplicative tests and the resistance of the market to improving patient care under such circumstances. The commenter also suggested that the impact analysis should be stratified according to primary care and specialty providers.

Response: Although we agree that a system that records the specific costs and benefits for each provider would yield a more accurate financial analysis, we believe that such a requirement would place a significant burden on providers and potentially limit participation in the EHR Incentive Programs. We also do not believe that there is an accurate method to calculate the loss of revenue due to the elimination of unnecessary or duplicative tests or market resistance to improving patient care. The reduction of costs while improving patient care is one of the goals of the EHR Incentive Programs, and we do not believe that these reductions should be classified as negative impacts for the healthcare system as they would also lead to lower overall health care costs. Nor do we believe it is possible for us to proactively estimate such savings at this time. Because both primary-care and specialty providers receive the same incentive payment amounts under this program, we do not believe there is a benefit to stratifying the impact analysis in this way.

d. Costs of EHR Adoption for Eligible Hospitals

AHA conducts annual surveys that among other measures, track hospital spending. This data reflects the latest figures from the 2008 AHA Survey. Costs at these levels of adoption were significantly higher in 2008 than in previous years. This may better reflect the costs of implementing additional functionalities. The range in yearly information technology spending among hospitals is large, from $36,000 to over $32 million based on the AHA data. EHR system costs specifically were reported by experts to run as high as $20 million to $100 million. HHS discussions with experts led to cost ranges for adoption that varied by hospital size and level of EHR system sophistication. Research to date has shown that adoption of comprehensive EHR systems is limited. In the aforementioned AHA study, 1.5 percent of these organizations had comprehensive systems, which were defined as hospital-wide clinical documentation of cases, test results, prescription and test ordering, plus support for decision-making that included treatment guidelines. Some 10.9 percent have a basic system that does not include physician and nursing notes, and can only be used in one area of the hospital. Applying a similar standard to the 2008 AHA data, results in roughly 3 to 4 percent of hospitals having comprehensive systems and 12 to 13 percent having basic systems. According to hospital CEOs, the main barrier to adoption is the cost of the systems, and the lack of capital. Hospitals have been concerned that they will not be able to recoup their investment, and they are already operating on limited margins. Because uptake of advanced systems is low, it is difficult to get a solid average estimate for implementation and maintenance costs that can be applied across the industry. In addition, we recognize that there are additional industry costs associated with adoption and implementation of EHR technology that are not captured in our estimates that eligible entities will incur. Because the impact of those activities, such as reduced staff productivity related to learning how to use the EHR technology, the need to add additional staff to work with HIT issues, and administrative costs related to reporting are unknown at this time and difficult to quantify.

Comment: Some commenters suggested that overall IT operating costs should be included as part of the analysis. These commenters also suggested that estimates for costs related to staff training were too low and should include time and resources devoted to understanding the EHR Incentive Programs regulations. Other commenters suggested that costs associated with the time and resources related to registration and attestation should be included as part of the analysis. Finally, some commenters suggested that costs associated with EHR products, consultants, and trained IT professionals have increased since the start of the EHR Incentive Programs and should be reflected in the analysis.

Response: As noted in this impact analysis, we based cost estimates for IT on peer-reviewed studies of EHR and health IT costs. These cost estimates included maintenance and operating costs specific to EHRs and staff training. There are many aspects of IT operating costs that are not directly related to the maintenance or operation of CEHRT, and we do not believe it would be appropriate to include those costs as part of the impact analysis of this regulation. We are not aware of any new data that suggests an overall increase in the costs of CEHRT or related implementation and maintenance costs since the start of the EHR Incentive Programs, and in many cases we believe that the product and maintenance costs of CEHRT can be significantly lower than our estimates. Therefore, we are continuing to use the estimates we proposed for this impact analysis. We also do not believe it is appropriate to include additional costs related to registration and attestation, as the cost for dedicating resources to these activities is addressed earlier in this final rule in our discussion of information collection requirements.

3. Medicare Incentive Program Costs

a. Medicare Eligible Professionals (EPs)

We continue the method of cost estimation we used to determine the estimated costs of the Medicare incentives for EPs in our Stage 1 final rule (75 FR 44549). In order to determine estimated costs, we first needed to determine the EPs with Medicare claims. Then, we calculated that about 14 percent of those EPs are hospital based according to the definition in § 495.4 (finalized in our Stage 1 final rule), and therefore, do not qualify for incentive payments. This percent of EPs was subtracted from the

total number of EPs who have claims with Medicare. These numbers were tabulated from Medicare claims data.

In the Stage 1 final rule, we also estimated that about 20 percent of EPs that were not hospital based will qualify for Medicaid incentive payments and will choose that program because the payments are higher. Current program data does not provide additional evidence regarding this, so we continued to use the 20 percent estimation in the current projections. Of the remaining EPs, we estimated the percentage which will be meaningful users each calendar year. As discussed previously, our estimates for the number of EPs that will successfully demonstrate meaningful use of CEHRT are uncertain. The percentage of Medicare EPs who will satisfy the criteria for demonstrating meaningful use of CEHRT and will qualify for incentive payments is a key, but a highly uncertain factor. Accordingly, the estimated number of nonhospital based Medicare EPs who will demonstrate meaningful use of CEHRT over the period CYs 2014 through 2019 is as shown in Table 22.

TABLE 22—MEDICARE EPS DEMONSTRATING MEANINGFUL USE OF CERTIFIED EHR TECHNOLOGY

	Calendar year					
	2014	2015	2016	2017	2018	2019
EPs who have claims with Medicare (thousands)	568.9	574.8	580.8	586.8	592.7	598.6
Nonhospital Based EPs (thousands)	491.0	496.1	501.3	506.4	511.5	516.7
EPs that are both Medicare and Medicaid EPs (thousands)	98.2	99.2	100.3	101.3	102.3	103.3
Percent of EPs who are Meaningful Users	37	46	52	57	62	67
Meaningful Users (thousands)	147.1	184.2	206.5	229.3	252.5	276.1

Our estimates of the incentive payments and payment adjustment savings are presented in Table 23. These payments reflect the Medicare and Medicaid incentive payments and payment adjustments included in 42 CFR Part 495 of our regulations. They reflect our assumptions about the proportion of EPs who will demonstrate meaningful use of CEHRT. These assumptions were developed based on a review of the studies presented in the Stage 1 impact analysis.

Specifically, our assumptions are based on literature estimating current rates of physician EHR adoption and rates of diffusion of EHRs and similar technologies. There are a number of studies that have attempted to measure the rate of adoption of electronic medical records (EMR) among physicians prior to the enactment of the HITECH Act (see, for example, Funky and Taylor (2005) The State and Pattern of Health Information Technology Adoption. RAND Monograph MG–409. Santa Monica: The RAND Corporation; Ford, E.W., Menachemi, N., Peterson, L.T., Huerta, T.R. (2009) ''Resistance is Futile: But it is Slowing the Pace of EHR Adoption Nonetheless'' Journal of the American Informatics Association 16(3): 274–281). More recently, there is also some data available to suggest that more providers have adopted EHR technology since the start of the EHR Incentive Programs. The 2011 ONC–AHA survey cited earlier found that the percentage of U.S. hospitals which had adopted EHRs increased from 16 to 35 percent between 2009 and 2011. In November 2011, the CDC survey cited earlier found the percentage of physicians who adopted basic (EHRs in their practice had doubled from 17 to 34 percent between 2008 and 2011. These survey results are in line with the estimated rate of EHR adoption presented in the Stage 1 impact analysis, but they constitute a relatively small sample on which to base new estimates. Therefore we maintain the estimates that were based on the study with the most rigorous definition, though we note again that neither the Stage 1 nor the Stage 2 meaningful use criteria are equivalent to a fully functional system as defined in this study. (DesRoches, CM, Campbell, EG, Rao, SR et al (2008) ''Electronic Health Records in Ambulatory Care-A National Survey of Physicians'' New England Journal of Medicine 359(1): 50–60. In addition, we note that the final penetration rates used in the initial estimates were developed in consensus with industry experts relying on the studies. Actual adoption trends could be different from these assumptions, given the elements of uncertainty we describe throughout this analysis.

Estimated net costs of the Medicare EP portion of the HITECH Act are shown in Table 23.

TABLE 23—ESTIMATED COSTS (+) AND SAVINGS (−) FOR MEDICARE EPS DEMONSTRATING MEANINGFUL USE OF CERTIFIED EHR TECHNOLOGY

[In billions]

Fiscal year	Incentive payments ($)	Payment adjustment receipts	Benefit payments	Net total ($)
2014	1.9			1.9
2015	2.0	−0.1		1.9
2016	0.8	−0.1		0.6
2017	0.3	−0.2		0.1
2018		−0.2		−0.2
2019		−0.2		−0.2

b. Medicare Eligible Hospitals and CAHs

In brief, the estimates of hospital adoption were developed by calculating projected incentive payments (which are driven by discharges), comparing them to projected costs of attaining meaningful use, and then making assumptions about how rapidly hospitals will adopt given the fraction of their costs that were covered.

Specifically, the first step in preparing estimates of Medicare program costs for eligible hospitals was to determine the amount of Medicare incentive payments that each hospital in the country could potentially receive under the statutory formula, based on its discharge numbers (total patients and Medicare patients). The total incentive payments potentially payable over a 4-year period vary significantly by hospitals' inpatient caseloads, ranging from a low of about $11,000 to a high of $12.9 million, with the median being $3.8 million. The potential Medicare incentive payments for each eligible hospital were compared with the hospital's expected cost of purchasing and operating certified EHR technology. Costs of adoption for each hospital were estimated using data from the 2009 AHA survey and IT supplement. Estimated costs varied by size of hospital and by the likely status of EHR adoption in that class of hospitals. Hospitals were grouped first by size (CAHs, non-CAH hospitals under 400 beds, and hospitals with 400 or more beds) because EHR adoption costs do vary by size: namely, larger hospitals with more diverse service offerings and large physician staffs generally implement more customized systems than smaller hospitals that might purchase off-the-shelf products. We then calculated the proportion of hospitals within each class that were at one of three levels of EHR adoption: (1) Hospitals which had already implemented relatively advanced systems that included CPOE systems for medications; (2) hospitals which had implemented more basic systems through which lab results could be shared, but not CPOE for medications; and (3) hospitals starting from a base level with neither CPOE or lab reporting. The CPOE for medication standard was chosen for this estimate because expert input indicated that the CPOE standard in the final meaningful use definition will be the hardest one for hospitals to meet. Table 24 provides these proportions.

TABLE 24—HOSPITAL IT CAPABILITIES BY HOSPITAL SIZE

Hospital size	Levels of adoption							
	Any CPOE meds		Lab results		Neither		Total	
	Number of hospitals	Percentage	Number of hospitals	Percentage	Number of hospitals	Percentage	Number of hospitals	Percentage
CAHs	169	22	390	51	210	27	769	23
Small/Medium	834	37	1,051	47	348	16	2,233	67
Large (400+ beds)	200	56	145	41	10	3	355	10
Total	1,203	36	1,586	47	568	17	3,357	100

We then calculated the costs of moving from these stages to meaningful use for each class of hospital, assuming that even for hospitals with CPOE systems they will incur additional costs of at least 10 percent of their IT budgets. These costs were based on cross-sectional data from the AHA survey and thus do not likely represent the true costs of implementing systems. This data reflects the latest figures from the 2009 AHA Survey. Costs at these levels of adoption were significantly higher than in previous years. This may better reflect the costs of implementing additional functionalities. We have also updated the number of discharges using the most recent cost report data available. The payment incentives available to hospitals under the Medicare and Medicaid programs are included in our regulations at 42 CFR part 495. We estimate that there are 12 MAOs that might be eligible to participate in the incentive program. Those plans have 29 eligible hospitals. The costs for the MA program have been included in the overall Medicare estimates.

Our estimated net costs for section 4102 of the HITECH Act are shown in Table 25: Estimated costs (+) and savings (–) for eligible hospitals adopting certified EHRs. This provision is estimated to increase Medicare hospital expenditures by a net total of $5.3 billion during FYs 2014 through 2019.

TABLE 25—ESTIMATED COSTS (+) AND SAVINGS (−) FOR MEDICARE ELIGIBLE HOSPITALS DEMONSTRATING MEANINGFUL USE OF CERTIFIED EHR TECHNOLOGY

[In billions]

Fiscal year	Incentive payments	Payment adjustment receipts	Benefit payments	Net total
2014	$2.1	.....	(1)	$2.1
2015	2.2	−0.4	(1)	1.8
2016	1.7	−0.5	(1)	1.2
2017	0.5	−0.3	(1)	0.2
2018	.....	−0.1	(1)	−0.1
2019	.....	.....	(1)	(1)

[1] Savings of less than $50 million.

Based on the comparison of Medicare incentive payments and implementation/operating costs for each eligible hospital (described previously), we made the assumptions shown in Table 25, related to the prevalence of CEHRT for FYs 2014 through 2018. These assumptions are consistent with the actual program data for 2011. As indicated, eligible hospitals that could cover the full cost of an EHR system through Medicare incentive payments were assumed to implement them relatively rapidly, and vice versa. In other words, eligible hospitals will have an incentive to purchase and implement an EHR system if they perceive that a large portion of the costs will be covered by the incentive payments. Table 26 shows the assumptions that were used.

TABLE 26—ASSUMED PROPORTION OF ELIGIBLE HOSPITALS WITH CERTIFIED EHR TECHNOLOGY, BY PERCENTAGE OF SYSTEM COST COVERED BY MEDICARE INCENTIVE PAYMENTS

Fiscal year	Incentive payments as percentage of EHR technology cost				
	100+%	75–100%	50–75%	25–50%	0–25%
2014	1.0	0.95	0.85	0.5	0.3
2015	1.0	1.0	0.95	0.75	0.5
2016	1.0	1.0	1.0	0.9	0.75
2017	1.0	1.0	1.0	1.0	0.9
2018	1.0	1.0	1.0	1.0	1.0

For instance, 95 percent of eligible hospitals whose incentive payments will cover between 75 percent and 100 percent of the cost of a certified EHR system were assumed to have a certified system in FY 2014. All such hospitals were assumed to have a certified EHR system in FY 2015 and thereafter.

High rates of EHR adoption are anticipated in the years leading up to FY 2015 due to the payment adjustments that will be imposed on eligible hospitals. However, we know from industry experts that issues surrounding the capacity of vendors and expert consultants to support implementation, issues of access to capital, and competing priorities in responding to payer demand will limit the number of hospitals that can adopt advanced systems in the short term. Therefore, we cannot be certain of the adoption rate for hospitals due to these factors and others previously outlined in this preamble.

For large, organized facilities such as hospitals, we believe that the revenue losses caused by these payment adjustments will be a substantial incentive to adopt certified EHR technology, even in instances where the Medicare incentive payments will cover only a portion of the costs of purchasing, installing, populating, and operating the EHR system. Based on the assumptions about incentive payments as percentages of EHR technology costs in Table 26, we estimated that the great majority of eligible hospitals will qualify for at least a portion of the Medicare incentive payments that they could potentially receive, and only a modest number will incur payment adjustments. Nearly all eligible hospitals are projected to have implemented CEHRT by FY 2019. Table 27 shows our estimated percentages of the total potential incentive payments associated with eligible hospitals that could demonstrate meaningful use of EHR systems. Also shown are the estimated percentages of potential incentives that will actually be paid each year.

TABLE 27—ESTIMATED PERCENTAGE OF MEDICARE INCENTIVES WHICH COULD BE PAID FOR MEANINGFUL USE OF CERTIFIED EHR TECHNOLOGY ASSOCIATED WITH ELIGIBLE HOSPITALS AND ESTIMATED PERCENTAGE PAYABLE IN YEAR

Fiscal year	Percent associated with eligible hospitals	Percent payable in year
2014	66.1	66.1
2015	80.2	72.2
2016	91.3	48.8
2017	97.7	.....
2018	100.0	.....

For instance in FY 2014, 66.1 percent of the total amount of incentive payments which could be payable in that year will be for eligible hospitals who have demonstrated meaningful use of CEHRT and therefore will be paid. In FY 2015, 80.2 percent of the total amount of incentive payments which could be payable will be for hospitals who have certified EHR systems, but some of those eligible hospitals will have already received 4 years of incentive payments, and therefore 72.2 percent of all possible incentive payments actually paid in that year.

The estimated payments to eligible hospitals were calculated based on the hospitals' qualifying status and individual incentive amounts under the statutory formula. Similarly, the estimated payment adjustments for nonqualifying hospitals were based on the market basket reductions and Medicare revenues. The estimated savings in Medicare eligible hospital benefit expenditures resulting from the use of hospital certified EHR systems are discussed under ''general considerations'' at the end of this section. We assumed no future growth in the total number of hospitals in the U.S. because growth in acute care hospitals has been minimal in recent years.

c. Critical Access Hospitals (CAHs)

We estimate that there are 1,325 CAHs eligible to receive EHR incentive payments. In the Stage 1 impact analysis, we estimated that the 22 percent of CAHs with relatively advanced EHR systems will achieve meaningful use before 2016 given on the financial assistance available under HITECH for Regional Extension Centers, whose priorities include assisting CAHs in EHR adoption. We also estimated that most of the remaining CAHs that had already adopted some kind of EHR system at that time (51 percent of CAHs) will also achieve meaningful use by 2016. Current program payment data, as well as current data from the Regional Extension Centers, provides some more information for us to alter these estimates. Our new estimates regarding the incentives that will be paid to CAHs are incorporated into the overall Medicare and Medicaid program costs.

4. Medicaid Incentive Program Costs

Under section 4201 of the HITECH Act, states can voluntarily participate in the Medicaid incentive payment program. However, as of the writing of this final rule 48 states are already participating in the Medicaid incentive payment program and the remaining

states have indicated they will begin participation in 2012. Therefore we anticipate that all states will be participating by 2014, as we estimated in the Stage 1 impact analysis. The payment incentives available to EPs and hospitals under the Medicaid programs are included in our regulations at 42 CFR part 495. The Federal costs for Medicaid incentive payments to providers who can demonstrate meaningful use of EHR technology were estimated similarly to the estimates for Medicare eligible hospital and EP. Table 28 shows our estimates for the net Medicaid costs for eligible hospitals and EPs.

TABLE 28—ESTIMATED FEDERAL COSTS (+) AND SAVINGS (−) UNDER MEDICAID

[In billions]

Fiscal year	Incentive payments		Benefit payments	Net total
	Hospitals	Eligible professionals		
2014	0.6	0.5	(1)	1.1
2015	0.4	0.8	(1)	1.2
2016	0.5	0.8	(1)	1.2
2017	0.5	0.7	(1)	1.2
2018	0.1	0.7	(1)	0.8
2019	0.0	0.5	(1)	0.5

[1] Savings of less than $50 million.

a. Medicaid EPs

To determine the Medicaid EP incentive payments, we first determined the number of qualifying EPs. As indicated previously, we assumed that 20 percent of the nonhospital-based Medicare EPs will meet the requirements for Medicaid incentive payments (30 percent of patient volume from Medicaid). All of these EPs were assumed to choose the Medicaid incentive payments, as they are larger. In addition, the total number of Medicaid EPs was adjusted to include EPs who qualify for the Medicaid incentive payments but not for the Medicare incentive payments, such as most pediatricians, dentists, certified nurse-midwives, nurse practitioners, and physicians assistants. As noted previously, there is much uncertainty about the rates of demonstration of meaningful use that will be achieved. Our estimates are listed in Table 29.

TABLE 29—ASSUMED NUMBER OF NONHOSPITAL-BASED MEDICAID EPS WHO WILL BE MEANINGFUL USERS OF CERTIFIED EHR TECHNOLOGY

[All population figures are in thousands]

		Calendar year					
		2014	2015	2016	2017	2018	2019
	EPs who have claims with Medicare	568.9	574.8	580.8	586.8	592.7	598.6
	Nonhospital-based EPs	491.0	496.1	501.3	506.4	511.5	516.7
A	EPs who meet the Medicaid patient volume threshold.	98.2	99.2	100.3	101.3	102.3	103.3
B	Medicaid[1] only EPs	46.6	47.4	48.1	48.9	49.7	50.4
	Total Medicaid EPs (A + B)	144.8	146.6	148.4	150.2	152.0	153.8
	Percent of EPs receiving incentive payment during year.	49.2%	58.8%	64.0%	52.9%	29.5%	22.6%
	Number of EPs receiving incentive payment during year.	71.2	86.3	95.0	79.4	44.8	34.8
	Percent of EPs who have ever received incentive payment.	49.2%	58.8%	64.0%	68.9%	73.5%	77.9%
	Number of EPs who have ever received incentive payment.	71.2	86.3	95.0	103.4	111.7	119.8

It should be noted that since the Medicaid EHR incentive payment program provides that a Medicaid EP can receive an incentive payment in their first year because he or she has demonstrated a meaningful use or because he or she has adopted, implemented, or upgraded certified EHR technology, these participation rates include not only meaningful users but eligible providers implementing CEHRT as well.

b. Medicaid Hospitals

Medicaid incentive payments to most acute-care hospitals were estimated using the same adoption assumptions and method as described previously for Medicare eligible hospitals and shown in Table 30. Because hospitals' Medicare and Medicaid patient loads differ, we separately calculated the range of percentage of total potential incentives that could be associated with qualifying hospitals, year by year, and the corresponding actual percentages payable each year. Acute care hospitals may qualify to receive both the Medicare and Medicaid incentive payments.

As stated previously, the estimated eligible hospital incentive payments were calculated based on the hospitals' qualifying status and individual incentive amounts payable under the statutory formula. The estimated savings in Medicaid benefit expenditures resulting from the use of CEHRT are discussed under ''general considerations.'' Since we were using

Medicare cost report data and little data existed for children's hospitals, we estimated the Medicaid incentives payable to children's hospitals as an add-on to the base estimate, using data on the number of children's hospitals compared to nonchildren's hospitals.

TABLE 30—ESTIMATED PERCENTAGE OF POTENTIAL MEDICAID INCENTIVES ASSOCIATED WITH ELIGIBLE HOSPITALS AND ESTIMATED PERCENTAGE PAYABLE EACH YEAR

Fiscal year	Percent associated with eligible hospitals	Percent payable in year
2014	67.5	59.3
2015	81.1	37.9
2016	91.8	33.7
2017	97.7	24.3
2018	100.0	10.7
2019	100.0	0.0

5. Benefits for All EPs and All Eligible Hospitals

In this final rule we have not quantified the overall benefits to the industry, nor to eligible hospitals or EPs in the Medicare, Medicaid, or MA programs. Although information on the costs and benefits of adopting systems that specifically meet the requirements for the EHR Incentive Programs (for example, certified EHR technology) has not yet been collected, and although some studies question the benefits of health information technology, a 2011 study completed by ONC (Buntin et al. 2011 ''The Benefits of Health Information Technology: A Review of the Recent Literature Shows Predominantly Positive Results'' *Health Affairs*.) found that 92 percent of 154 articles published from July 2007 up to February 2010 reached conclusions that showed the overall positive effects of health information technology on key aspects of care, including quality and efficiency of health care. Among the positive results highlighted in these articles were decreases in patient mortality, reductions in staffing needs, correlation of clinical decision support to reduced transfusion and costs, reduction in complications for patients in hospitals with more advanced health IT, and a reduction in costs for hospitals with less advanced health IT. Another study, at one hospital emergency room in Delaware, showed the ability to download and create a file with a patient's medical history saved the ER $545 per use, mostly in reduced waiting times. A pilot study of ambulatory practices found a positive ROI within 16 months and annual savings thereafter (Greiger, et al. 2007, A Pilot Study to Document the Return on Investment for Implementing an Ambulatory Electronic Health Record at an Academic Medical Center *http://www.journalacs.org/article/S1072-7515%2807%2900390-0/abstract-article-footnote-1s*.) A study that compared the productivity of 75 providers within a large urban primary care practice over a 4-year period showed increases in productivity of 1.7 percent per month per provider after EHR adoption (DeLeon et al. 2010, ''The business end of health information technology. Can a fully integrated electronic health record increase provider productivity in a large community practice?'' *J Med Pract Manage*). Some vendors have estimated that EHRs could result in cost savings of between $100 and $200 per patient per year. At the time of the writing of this final rule, there was only limited information on participation in the EHR Incentive Programs and on adoption of Certified EHR Technology. As participation and adoption increases, there will be more opportunities to capture and report on cost savings and benefits. A number of relevant studies are required in the HITECH Act for this specific purpose, and the results will be made public, as they are available.

6. Benefits to Society

According to the recent CBO study ''Evidence on the Costs and Benefits of Health Information Technology'' (*http://www.cbo.gov//ftpdocs/91xx/doc9168/05-20-HealthIT.pdf*) when used effectively, EHRs can enable providers to deliver health care more efficiently. For example, the study states that EHRs can reduce the duplication of diagnostic tests, prompt providers to prescribe cost-effective generic medications, remind patients about preventive care reduce unnecessary office visits and assist in managing complex care. This is consistent with the findings in the ONC study cited previously. Further, the CBO report claims that there is a potential to gain both internal and external savings from widespread adoption of health IT, noting that internal savings will likely be in the reductions in the cost of providing care, and that external savings could accrue to the health insurance plan or even the patient, such as the ability to exchange information more efficiently. However, it is important to note that the CBO identifies the highest gains accruing to large provider systems and groups and claims that office-based physicians may not realize similar benefits from purchasing health IT products. At this time, there is limited data regarding the efficacy of health IT for smaller practices and groups, and the CBO report notes that this is a potential area of research and analysis that remains unexamined. The benefits resulting specifically from this final rule are even harder to quantify because they represent, in many cases, adding functionality to existing systems and reaping the network externalities created by larger numbers of providers participating in information exchange.

Since the CBO study, there has been additional research that has emerged documenting the association of EHRs with improved outcomes among diabetics (Hunt, JS et al. (2009) ''The impact of a physician-directed health information technology system on diabetes outcomes in primary care: A pre- and post-implementation study'' Informatics in Primary Care 17(3):165–74; Pollard, C et al. (2009) ''Electronic patient registries improve diabetes care and clinical outcomes in rural community health centers'' Journal of Rural Health 25(1):77–84) and trauma patients (Deckelbaum, D. et al. (2009) ''Electronic medical records and mortality in trauma patients'' The Journal of Trauma: Injury, Infection, and Critical Care 67(3): 634–636), enhanced efficiencies in ambulatory care settings (Chen, C et al. (2009) ''The Kaiser Permanente Electronic Health Record: Transforming and Streamlining Modalities of Care.''Health Affairs 28(2):323–333), and improved outcomes and lower costs in hospitals (Amarasingham, R. et al. (2009) ''Clinical information technologies and inpatient outcomes: A multiple hospital study'' Archives of Internal Medicine 169(2):108–14). However, data relating specifically to the EHR Incentive Programs is limited at this time.

7. General Considerations

The estimates for the HITECH Act provisions were based on the economic assumptions underlying the President's 2013 Budget. Under the statute, Medicare incentive payments for CEHRT are excluded from the determination of MA capitation benchmarks. As noted previously, there is considerable uncertainty about the rate at which eligible hospitals, CAHs and EPs are adopting EHRs and other HIT. Nonetheless, we believe that the Medicare incentive payments and the prospect of significant payment adjustments for not demonstrating meaningful use will result in the great majority of hospitals implementing CEHRT in the early years of the Medicare EHR incentive program. We expect that a steadily growing proportion of practices will implement CEHRT over the next 10 years, even in the absence of the Medicare incentives.

Actual future Medicare and Medicaid costs for eligible hospital and EP incentives will depend in part on the standards developed and applied for assessing meaningful use of certified EHR technology. We are administering the requirements in such a way as to encourage adoption of CEHRT and facilitate qualification for incentive payments, and expect to adopt progressively demanding standards at each stage year. Certified EHR technology has the potential to help reduce medical costs through efficiency improvements, such as prompter treatments, avoidance of duplicate or otherwise unnecessary services, and reduced administrative costs (once systems are in place), with most of these savings being realized by the providers rather than by Medicare or Medicaid. To the extent that this technology will have a net positive effect on efficiency, then more rapid adoption of such EHR systems will achieve these efficiencies sooner than will otherwise occur, without the EHR incentives. As noted, the possible efficiency savings from the adoption of EHR is expected to be realized by the providers rather than the payers. We expect a negligible impact on benefit payments to hospitals and EPs from Medicare and Medicaid as a result of the implementation of EHR technology.

In the process of preparing the estimates for this rule, we consulted with and/or relied on internal CMS sources, as well as the following sources:

- Congressional Budget Office (staff and publications).
- American Medical Association (staff and unpublished data).
- American Hospital Association.
- Actuarial Research Corporation.
- CMS Statistics 2011.
- RAND Health studies on:

++ ''The State and Pattern of Health Information Technology Adoption'' (Fonkych & Taylor, 2005);

++ ''Extrapolating Evidence of Health Information Technology Savings and Costs'' (Girosi, Meili, & Scoville, 2005); and

++ ''The Diffusion and Value of Healthcare Information Technology'' (Bower, 2005).

- Kaiser Permanente (staff and publications).
- Miscellaneous other sources (Health Affairs, American Enterprise Institute, ONC survey, Journal of Medical Practice Management, news articles and perspectives).

As noted at the beginning of this analysis, it is difficult to predict the actual impacts of the HITECH Act with much certainty. We believe the assumptions and methods described herein are reasonable for estimating the financial impact of the provisions on the Medicare and Medicaid programs, but acknowledge the wide range of possible outcomes.

8. Summary

The total cost to the Medicare and Medicaid programs between 2014 and 2019 is estimated to be $15.4 billion in transfers. We do not estimate total costs to the provider industry, but rather provide a possible per EP and per eligible hospital outlay for implementation and maintenance.

TABLE 31—ESTIMATED EHR INCENTIVE PAYMENTS AND BENEFITS IMPACTS ON THE MEDICARE AND MEDICAID PROGRAMS OF THE HITECH EHR INCENTIVE PROGRAM

[Fiscal year]—[In billions]

Fiscal year	Medicare eligible		Medicaid eligible		Total
	Hospitals	Professionals	Hospitals	Professionals	
2014	$2.1	$1.9	$0.6	$0.5	$5.1
2015	1.8	1.9	0.4	0.8	4.9
2016	1.2	0.6	0.5	0.8	3.1
2017	0.2	0.1	0.5	0.7	1.5
2018	−0.1	−0.2	0.1	0.7	0.5
2019		−0.2	0.0	0.5	0.3

9. Explanation of Benefits and Savings Calculations

In our analysis, we assume that benefits to the program will accrue in the form of savings to Medicare, through the Medicare payment adjustments. Expected qualitative benefits, such as improved quality of care, better health outcomes, and the like, are unable to be quantified at this time.

D. Accounting Statement

Whenever a rule is considered a significant rule under Executive Order 12866, we are required to develop an accounting statement indicating the classification of the expenditures associated with the provisions of this final rule. Monetary annualized benefits and nonbudgetary costs are presented as discounted flows using 3 percent and 7 percent factors. Additional expenditures that will be undertaken by eligible entities in order to obtain the Medicare and Medicaid incentive payments to adopt and demonstrate meaningful use of certified EHR technology, and to avoid the Medicare payment adjustments that will ensue if they fail to do so are noted by a placeholder in the accounting statement. We are not able to explicitly define the universe of those additional costs, nor specify what the high or low range might be to implement EHR technology in this final rule.

Expected qualitative benefits include improved quality of care, better health outcomes, reduced errors and the like. Private industry costs will include the impact of EHR activities such as temporary reduced staff productivity related to learning how to use the EHR, the need for additional staff to work with HIT issues, and administrative costs related to reporting.

TABLE 32—ACCOUNTING STATEMENT: CLASSIFICATION OF ESTIMATED EXPENDITURES CYS 2014 THROUGH 2019

[In millions]

Category					
	Benefits				
Qualitative	Expected qualitative benefits include improved quality of care, better health outcomes, reduced errors and the like.				
	Costs				
.	Year dollar	Estimates (in millions)	Unit discount rate	Period covered	
		Low estimate	High Estimate		
Annualized Monetized Costs to Private Industry Associated with Reporting Requirements.	2014	$178.0	$186.1	7%	CY 2014
		$178.0	$186.1	3%	
Qualitative—Other private industry costs associated with the adoption of EHR technology.	These costs will include the impact of EHR activities such as reduced staff productivity related to learning how to use the EHR technology, the need for additional staff to work with HIT issues, and administrative costs related to reporting.				
	Transfers				
	Year dollar	Estimates (in millions)	Unit discount rate	Period covered	
Federal Annualized Monetized	2014	$2,558	7%	CYs 2014–2019	
		$2,441	3%		
From Whom To Whom?	Federal Government to Medicare- and Medicaid-eligible professionals and hospitals.				

E. Conclusion

The previous analysis, together with the remainder of this preamble, provides an RIA. We believe there are many positive effects of adopting EHR on health care providers, quite apart from the incentive payments to be provided under this rule. We believe there are benefits that can be obtained by eligible hospitals and EPs, including: reductions in medical recordkeeping costs, reductions in repeat tests, decreases in length of stay, and reduced errors. When used effectively, EHRs can enable providers to deliver health care more efficiently. For example, EHRs can reduce the duplication of diagnostic tests, prompt providers to prescribe cost-effective generic medications, remind patients about preventive care, reduce unnecessary office visits, and assist in managing complex care. We also believe that internal savings will likely come through the reductions in the cost of providing care. While economically significant, we do not believe that the net effect on individual providers will be negative over time except in very rare cases. Accordingly, we believe that the RFA objective to minimize burden on small entities is met by this final rule.

In accordance with the provisions of Executive Order 12866, this regulation was reviewed by the Office of Management and Budget.

List of Subjects

42 CFR Part 412

Administrative practice and procedure, Health facilities, Medicare, Puerto Rico, Reporting and recordkeeping requirements.

42 CFR Part 413

Health facilities, Kidney diseases, Medicare, Reporting and recordkeeping requirements.

42 CFR Part 495

Administrative practice and procedure, Electronic health records, Health facilities, Health professions, Health maintenance organizations (HMO), Medicaid, Medicare, Penalties, Privacy, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, the Centers for Medicare & Medicaid Services amends 42 CFR chapter IV as set forth below:

PART 412—PROSPECTIVE PAYMENT SYSTEMS FOR INPATIENT HOSPITAL SERVICES

■ 1. The authority citation for part 412 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart D—Basic Method for Determining Prospective Payment Federal Rates for Inpatient Operating Costs

■ 2. Section 412.64 is amended as follows:

■ A. Revising paragraph (d)(3) introductory text.

■ B. Adding paragraphs (d)(4) and (5).

The revision and addition read as follows:

§ 412.64 Federal rates for inpatient operating costs for Federal fiscal year 2005 and subsequent fiscal years.

* * * * *

(d) * * *

(3) Beginning fiscal year 2015, in the case of a ''subsection (d) hospital,'' as defined under section 1886(d)(1)(B) of the Act, that is not a meaningful electronic health record (EHR) user as defined in part 495 of this chapter for the applicable EHR reporting period and does not receive an exception, three-fourths of the applicable percentage change specified in paragraph (d)(1) of this section is reduced—

* * * * *

(4) *Exception*–(i) *General rules.* The Secretary may, on a case-by-case basis, exempt an eligible hospital that is not a qualifying eligible hospital from the application of the reduction under paragraph (d)(3) of this section if the Secretary determines that compliance with the requirement for being a meaningful EHR user would result in a significant hardship for the eligible hospital.

(ii) To be considered for an exception, a hospital must submit an application, in the manner specified by CMS, demonstrating that it meets one or more than one of the criteria specified in this paragraph (d)(4) of this section. These types of exceptions are subject to annual renewal, but in no case may a hospital be granted this type of exception for more than 5 years. (See § 495.4 for definitions of payment adjustment year, EHR reporting period, and meaningful EHR user.)

(A) During any 90-day period from the beginning of the fiscal year that is 2 years before the payment adjustment year to April 1 of the year before the payment adjustment year, the hospital was located in an area without sufficient Internet access to comply with the meaningful use objectives requiring internet connectivity, and faced insurmountable barriers to obtaining such internet connectivity. Applications requesting this exception must be submitted by April 1 of the year before the applicable payment adjustment year.

(B)(*1*) During the fiscal year that is 2 fiscal years before the payment adjustment year, the hospital that has previously demonstrated meaningful use faces extreme and uncontrollable circumstances that prevent it from becoming a meaningful EHR user. Applications requesting this exception must be submitted by April 1 of the year before the applicable payment adjustment year.

(*2*) During the fiscal year preceding the payment adjustment year, the hospital that has not previously demonstrated meaningful use faces extreme and uncontrollable circumstances that prevent it from becoming a meaningful EHR user. Applications requesting this exception must be submitted by April 1 of the year before the applicable payment adjustment year.

(C) The hospital is new in the payment adjustment year, and has not previously operated (under previous or present ownership). This exception expires beginning with the first Federal fiscal year that begins on or after the hospital has had at least one 12-month (or longer) cost reporting period after they accept their first Medicare covered patient. For purposes of this exception, the following hospitals are not considered new hospitals:

(*1*) A hospital that builds new or replacement facilities at the same or another location even if coincidental with a change of ownership, a change in management, or a lease arrangement.

(*2*) A hospital that closes and subsequently reopens.

(*3*) A hospital that changes its status from a CAH to a hospital that is subject to the Medicare hospital inpatient prospective payment systems.

(5) A State in which hospitals are paid for services under section 1814(b)(3) of the Act must—

(i) Adjust the payments to each eligible hospital in the State that is not a meaningful EHR user in a manner that is designed to result in an aggregate reduction in payments to hospitals in the State that is equivalent to the aggregate reduction that would have occurred if payments had been reduced to each eligible hospital in the State in a manner comparable to the reduction under paragraph (d)(3) of this section; and

(ii) Provide to the Secretary, by January 1, 2013, a report on the method that it proposes to employ in order to make the requisite payment adjustment described in paragraph (d)(5)(i) of this section.

* * * * *

PART 413—PRINCIPLES OF REASONABLE COST REIMBURSEMENT; PAYMENT FOR END-STAGE RENAL DISEASE SERVICES; OPTIONAL PROSPECTIVELY DETERMINED PAYMENT RATES FOR SKILLED NURSING FACILITIES

■ 3. The authority citation for part 413 continues to read as follows:

Authority: Secs. 1102, 1812(d), 1814(b), 1815, 1833(a), (i), and (n), 1861(v), 1871, 1881, 1883, and 1886 of the Social Security Act (42 U.S.C. 1302, 1395d(d), 1395f(b), 1395g, 1395l(a), (i), and (n), 1395x(v), 1395hh, 1395rr, 1395tt, and 1395ww); and sec. 124 of Public Law 106–133 (113 Stat. 1501A–332).

■ 4. Section 413.70 is amended by revising paragraphs (a)(6)(i) introductory text, (a)(6)(ii), and (a)(6)(iii) to read as follows:

§ 413.70 Payment for services of a CAH.

(a) * * *

(6)(i) For cost reporting periods beginning in or after FY 2015, if a CAH is not a qualifying CAH for the applicable EHR reporting period, as defined in § 495.4 and § 495.106(a) of this chapter, then notwithstanding the percentage applicable in paragraph (a)(1) of this section, the reasonable costs of the CAH in providing CAH services to its inpatients are adjusted by the following applicable percentage:

* * * * *

(ii) The Secretary may on a case-by-case basis, exempt a CAH that is not a qualifying CAH from the application of the payment adjustment under paragraph (a)(6)(i) of this section if the Secretary determines that compliance with the requirement for being a meaningful user would result in a significant hardship for the CAH. In order to be considered for an exception, a CAH must submit an application demonstrating that it meets one or more of the criteria specified in this paragraph (a)(6) for the applicable payment adjustment year no later than November 30 after the close of the applicable EHR reporting period. The Secretary may grant an exception for one or more of the following:

(A) During any 90-day period from the beginning of the cost reporting period that begins in the fiscal year before the payment adjustment year to November 30 after the end of the payment adjustment year, the hospital was located in an area without sufficient Internet access to comply with the meaningful use objectives requiring Internet connectivity, and faced insurmountable barriers to obtaining such Internet connectivity.

(B) A CAH that faces extreme and uncontrollable circumstances that prevent it from becoming a meaningful EHR user during the payment adjustment year.

(C) The CAH is new in the payment adjustment year and has not previously operated (under previous or present ownership). This exception expires beginning with the first Federal fiscal year that begins on or after the hospital

has had at least one 12-month (or longer) cost reporting period after they accept their first Medicare-covered patient. For the purposes of this exception, the following CAHs are not considered new CAHs:

(*1*) A CAH that builds new or replacement facilities at the same or another location even if coincidental with a change of ownership, a change in management, or a lease arrangement.

(*2*) A CAH that closes and subsequently reopens.

(*3*) A CAH that has been converted from an eligible hospital as defined at § 495.4 of this chapter.

(iii) Exceptions granted under paragraph (a)(6)(ii) of this section are subject to annual renewal, but in no case may a CAH be granted such an exception for more than 5 years.

* * * * *

PART 495—STANDARDS FOR THE ELECTRONIC HEALTH RECORD TECHNOLOGY INCENTIVE PROGRAM

■ 5. The authority citation for part 495 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart A—General Provisions

■ 6. Section 495.4 is amended as follows:

■ A. Revising the definition of ''EHR reporting period''.

■ B. Adding the definition of ''EHR reporting period for a payment adjustment year'' in alphabetical order.

■ C. Revising the definition of ''Hospital-based EP''.

■ D. Revising paragraphs (1) and (3) of the definition of ''Meaningful EHR user''.

■ E. Adding the definition of ''Payment adjustment year'' in alphabetical order.

The revisions and additions read as follows:

§ 495.4 Definitions.

* * * * *

EHR reporting period. Except with respect to payment adjustment years, EHR reporting period means either of the following:

(1) For an eligible EP—

(i) For the payment year in which the EP is first demonstrating he or she is a meaningful EHR user, any continuous 90-day period within the calendar year;

(ii) Except as specified in paragraphs (1)(iii) and (1)(iv) of this definition, for the subsequent payment years following the payment year in which the EP first successfully demonstrates he or she is a meaningful EHR user, the calendar year.

(iii) For an EP seeking to demonstrate he or she is a meaningful EHR user for the Medicare EHR incentive program for CY 2014, any of the following 3-month periods:

(A) January 1, 2014 through March 31, 2014.

(B) April 1, 2014 through June 30, 2014.

(C) July 1, 2014 through September 30, 2014.

(D) October 1, 2014 through December 31, 2014.

(iv) For an EP seeking to demonstrate he or she is a meaningful EHR user for the Medicaid EHR incentive program for CY 2014 any continuous 90-day period within CY 2014.

(2) For an eligible hospital or CAH—

(i) For the payment year in which the eligible hospital or CAH is first demonstrating it is a meaningful EHR user, any continuous 90-day period within the Federal fiscal year;

(ii) Except as specified in paragraph (2)(iii) of this definition, for the subsequent payment years following the payment year in which the eligible hospital or CAH first successfully demonstrates it is a meaningful EHR user, the Federal fiscal year.

(iii) For an eligible hospital or CAH seeking to demonstrate it is a meaningful EHR user for FY 2014, any of the following 3-month periods:

(A) October 1, 2013 through December 31, 2013.

(B) January 1, 2014 through March 31, 2014.

(C) April 1, 2014 through June 30, 2014.

(D) July 1, 2014 through September 30, 2014.

EHR reporting period for a payment adjustment year. For a payment adjustment year, the EHR reporting period means the following:

(1) For an EP—

(i)(A) Except as provided in paragraphs (1)(i)(B), (ii), and (iii) of this definition, the calendar year that is 2 years before the payment adjustment year.

(B) The special EHR reporting period for CY 2014 (specified in paragraph (1)(iii) or (1)(iv) of this definition, as applicable) of the definition of ''EHR Reporting Period'' that occurs within the calendar year that is 2 years before the payment adjustment year and is only for EHR reporting periods in CY 2014.

(ii) If an EP is demonstrating he or she is a meaningful EHR user for the first time in the calendar year, that is 2 years before the payment adjustment year, then any continuous 90-day period within such (2 years prior) calendar year.

(iii)(A) If in the calendar year that is 2 years before the payment adjustment year and in all prior calendar years, the EP has not successfully demonstrated he or she is a meaningful EHR user, then any continuous 90-day period that both begins in the calendar year 1 year before the payment adjustment year and ends at least 3 months before the end of such prior year.

(B) Under this exception, the provider must successfully register for and attest to meaningful use no later than the date October 1 of the year before the payment adjustment year.

(2) For an eligible hospital—

(i)(A) Except as provided in paragraphs (2)(i)(B), (ii), and (iii) of this definition, the Federal fiscal year that is 2 years before the payment adjustment year.

(B) The special EHR reporting period for FY 2014 (defined in paragraph (2)(iii) of the definition ''EHR Reporting Period'') that occurs within the fiscal year that is 2 years before the payment adjustment year and is only for EHR reporting periods in fiscal year 2014.

(ii) If an eligible hospital is demonstrating it is a meaningful EHR user for the first time in the Federal fiscal year that is 2 years before the payment adjustment year, then any continuous 90-day period within such (2 years prior) Federal fiscal year.

(iii)(A) If in the Federal fiscal year that is 2 years before the payment adjustment year and for all prior Federal fiscal years the eligible hospital has not successfully demonstrated it is a meaningful EHR user, then any continuous 90-day period that both begins in the Federal fiscal year that is 1 year before the payment adjustment year and ends at least 3 months before the end of such prior Federal fiscal year.

(B) Under this exception, the eligible hospital must successfully register for and attest to meaningful use no later than July 1 of the year before the payment adjustment year.

(3) For a CAH—

(i) Except as provided in paragraph (3)(ii) of this definition, the Federal fiscal year that is the payment adjustment year.

(ii) If the CAH is demonstrating it is a meaningful EHR user for the first time in the payment adjustment year, any continuous 90-day period within the Federal fiscal year that is the payment adjustment year.

* * * * *

Hospital-based EP. Unless it meets the requirements of § 495.5 of this part, a hospital-based EP means an EP who furnishes 90 percent or more of his or her covered professional services in

sites of service identified by the codes used in the HIPAA standard transaction as an inpatient hospital or emergency room setting in the year preceding the payment year, or in the case of a payment adjustment year, in either of the 2 years before such payment adjustment year.

(1) For Medicare, this is calculated based on—

(i) The FFY preceding the payment year; and

(ii) For the payment adjustments, on the—

(A) FFY preceding the payment adjustment year; or

(B) FFY 2 years before the payment adjustment year.

(2) For Medicaid, it is at the State's discretion if the data is gathered on the Federal fiscal year or calendar year preceding the payment year.

* * * * *

Meaningful EHR user * * *

(1) Subject to paragraph (3) of this definition, an EP, eligible hospital or CAH that, for an EHR reporting period for a payment year or payment adjustment year, demonstrates in accordance with § 495.8 meaningful use of Certified EHR Technology by meeting the applicable objectives and associated measures under § 495.6 and successfully reporting the clinical quality measures selected by CMS to CMS or the States, as applicable, in the form and manner specified by CMS or the States, as applicable; and

* * * * *

(3) To be considered a meaningful EHR user, at least 50 percent of an EP's patient encounters during an EHR reporting period for a payment year (or, in the case of a payment adjustment year, during an applicable EHR reporting period for such payment adjustment year) must occur at a practice/location or practices/locations equipped with Certified EHR Technology.

* * * * *

Payment adjustment year means either of the following:

(1) For an EP, a calendar year beginning with CY 2015.

(2) For a CAH or an eligible hospital, a Federal fiscal year beginning with FY 2015.

* * * * *

■ 7. Section 495.5 is added to read as follows:

§ 495.5 Requirements for EPs seeking to reverse a hospital-based determination under § 495.4.

(a) *Exception for certain EPs.* Beginning with payment year 2013, an EP who meets the definition of hospital-based EP specified in § 495.4 but who can demonstrate to CMS that the EP funds the acquisition, implementation, and maintenance of Certified EHR Technology, including supporting hardware and interfaces needed for meaningful use without reimbursement from an eligible hospital or CAH, and uses such Certified EHR Technology in the inpatient or emergency department of a hospital (instead of the hospital's Certified EHR Technology), may be determined by CMS to be a nonhospital-based EP.

(b) *Process for determining a nonhospital-based EP.* When an EP registers for a given payment year they should receive a determination of whether they have been determined ''hospital-based.''

(1) An EP determined ''hospital-based,'' but who wishes to be determined nonhospital-based as specified in paragraph (a) of section, may use an administrative process to provide documentation and seek a nonhospital-based determination. Such administrative process will be available throughout the incentive payment year and including the 2 months following the incentive payment year in which the EP may attest to being a meaningful EHR user.

(2) If an EP is determined nonhospital-based under paragraph (a) of this section, to be considered nonhospital-based for subsequent payment years, the EP must attest in such payment year (or by the time the EP must attest it is a meaningful EHR user for such year) that the EP continues to meet the criteria of paragraph (a) of this section.

(c) *Requirements for nonhospital-based EPs.* An EP determined nonhospital-based must—

(1) Continue to meet all applicable requirements to receive an incentive payment, including meeting all requirements for meaningful use; and

(2) Demonstrate meaningful use using all encounters at all locations equipped with Certified EHR Technology, including those in the inpatient and emergency departments of the hospital.

■ 8. Section 495.6 is amended as follows:

■ A. Redesignating paragraph (a)(2)(ii) as paragraph (a)(2)(ii)(A).

■ B. Adding paragraph (a)(2)(ii)(B).

■ C. Redesignating paragraph (b)(2)(ii) as paragraph (b)(2)(ii)(A).

■ D. Adding paragraph (b)(2)(ii)(B).

■ E. In paragraphs (c) introductory text and (c)(1), the references ''paragraphs (d) through (g)'' are removed and the references ''paragraphs (d) through (m)'' is added in their place.

■ F. Redesignating paragraph (d)(1)(ii) as paragraph (d)(1)(ii)(A).

■ G. Adding paragraph (d)(1)(ii)(B).

■ H. Redesignating paragraph (d)(4)(iii) as paragraph (d)(4)(iii)(A).

■ I. Adding a paragraph (d)(4)(iii)(B).

■ J. Redesignating paragraph (d)(8)(i)(E) as paragraph (d)(8)(i)(E)(*1*).

■ K. Adding paragraphs (d)(8)(i)(E)(*2*) and (*3*).

■ L. Redesignating paragraph (d)(8)(ii) as paragraph (d)(8)(ii)(A).

■ M. Adding paragraphs (d)(8)(ii)(B) and (C).

■ N. Redesignating paragraph (d)(8)(iii) as paragraph (d)(8)(iii)(A).

■ O. Adding paragraphs (d)(8)(iii)(B) and (C).

■ P. Redesignating paragraph (d)(10)(i) as paragraph (d)(10)(i)(A).

■ Q. Adding paragraph (d)(10)(i)(B).

■ R. Redesignating paragraph (d)(10)(ii) as paragraph (d)(10)(ii)(A).

■ S. Adding a paragraph (d)(10)(ii)(B).

■ T. Redesignating paragraph (d)(12)(i) as paragraph (d)(12)(i)(A).

■ U. Adding a paragraph (d)(12)(i)(B).

■ V. Redesignating paragraph (d)(12)(ii) as paragraph (d)(12)(ii)(A).

■ W. Adding a paragraph (d)(12)(ii)(B).

■ X. Redesignating paragraph (d)(12)(iii) as paragraph (d)(12)(iii)(A).

■ Y. Adding a paragraph (d)(12)(iii)(B).

■ Z. Redesignating paragraph (d)(14)(i) as paragraph (d)(14)(i)(A).

■ AA. Adding a paragraph (d)(14)(i)(B).

■ BB. Redesignating paragraph (d)(14)(ii) as paragraph (d)(14)(ii)(A).

■ CC. Adding a paragraph (d)(14)(ii)(B).

■ DD. In paragraph (e) introductory text—

■ i. Removing the colon and adding a period in its place.

■ ii. Adding a sentence at the end of the paragraph.

■ EE. Redesignating paragraph (e)(5)(i) as paragraph (e)(5)(i)(A).

■ FF. Adding a paragraph (e)(5)(i)(B).

■ GG. Redesignating paragraph (e)(5)(ii) as paragraph (e)(5)(ii)(A).

■ HH. Adding paragraph (e)(5)(ii)(B).

■ II. Redesignating paragraph (e)(9)(i) as (e)(9)(i)(A).

■ JJ. Adding paragraph (e)(9)(i)(B).

■ KK. Redesignating paragraph (e)(10)(i) as (e)(10)(i)(A).

■ LL. Adding paragraph (e)(10)(i)(B).

■ MM. Redesignating paragraph (f)(1)(ii) as paragraph (f)(1)(ii)(A).

■ NN. Adding paragraphs (f)(1)(ii)(B) and (C).

■ OO. Redesignating paragraph (f)(7)(i)(E) as paragraph (f)(7)(i)(E)(*1*).

■ PP. Adding a paragraphs (f)(7)(i)(E)(*2*) and (*3*).

■ QQ. Redesignating paragraph (f)(7)(ii) as (f)(7)(ii)(A).

■ RR. Adding paragraphs (f)(7)(ii)(B) and (C).

■ SS. Redesignating paragraph (f)(9)(i) as paragraph (f)(9)(i)(A).
■ TT. Adding a paragraph (f)(9)(i)(B).
■ UU. Redesignating paragraph (f)(9)(ii) as paragraph (f)(9)(ii)(A).
■ VV. Adding a paragraph (f)(9)(ii)(B).
■ WW. Redesignating paragraphs (f)(11)(i) and (ii) as paragraphs (f)(11)(i)(A) and (ii)(A), respectively.
■ XX. Adding paragraphs (f)(11)(i)(B) and (ii)(B).
■ YY. Redesignating paragraph (f)(12)(i) as paragraph (f)(12)(i)(A).
■ ZZ. Adding a paragraph (f)(12)(i)(B).
■ AAA. Redesignating paragraph (f)(12)(ii) as paragraph (f)(12)(ii)(A).
■ BBB. Adding a paragraph (f)(12)(ii)(B).
■ CCC. Redesignating paragraph (f)(12)(iii) as paragraph (f)(12)(iii)(A).
■ DDD. Adding a paragraph (f)(12)(iii)(B).
■ EEE. Redesignating paragraph (f)(13)(i) as paragraph (f)(13)(i)(A).
■ FFF. Adding a paragraph (f)(13)(i)(B).
■ GGG. Redesignating paragraph (f)(13)(ii) as paragraph (f)(13)(ii)(A).
■ HHH. Adding a paragraph (f)(13)(ii)(B).
■ III. In paragraph (g) introductory text—
■ i. Removing the colon and adding a period in its place.
■ ii. Adding a sentence at the end of the paragraph.
■ JJJ. Redesignating paragraph (g)(8)(i) as paragraph (g)(8)(i)(A).
■ KKK. Adding a paragraph (g)(8)(i)(B).
■ LLL. Redesignating paragraph (g)(9)(i) as paragraph (g)(9)(i)(A).
■ MMM. Adding a paragraph (g)(9)(i)(B).
■ NNN. Redesignating paragraph (g)(10)(i) as paragraph (g)(10)(i)(A).
■ OOO. Adding a paragraph (g)(10)(i)(B).
■ PPP. Revising paragraphs (h) and (i).
■ QQQ. Adding new paragraphs (j) through (m).

The additions and revisions read as follows:

§ 495.6 Meaningful use objectives and measures for EPs, eligible hospitals, and CAHs.

* * * * *

(a) * * *

(2) * * *

(ii) * * *

(B) Beginning 2014, an exclusion does not reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (e) of this section unless five or more objectives can be excluded. An EP must meet five of the objectives and associated measures specified in paragraph (e) of this section, one of which must be either paragraph (e)(9) or (10) of this section, unless the EP has an exclusion from five or more objectives specified in paragraph (e) of this section, in which case the EP must meet all remaining objectives and associated measures in paragraph (e) of this section.

* * * * *

(b) * * *

(2) * * *

(ii) * * *

(B) Beginning 2014, an exclusion does not reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (g) of this section. Eligible hospitals or CAHs must meet five of the objectives and associated measures specified in paragraph (g) of this section, one which must be specified in paragraph (g)(8), (9), or (10) of this section.

* * * * *

(d) * * *

(1) * * *

(ii) * * *

(B) Subject to paragraph (c) of this section, more than 30 percent of medication orders created by the EP during the EHR reporting period are recorded using computerized provider order entry, or the measure specified in paragraph (d)(1)(ii)(A) of this section.

* * * * *

(4) * * *

(iii) * * *

(B) Beginning 2013, any EP who does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his/her EHR reporting period, or the exclusion specified in (d)(4)(iii)(A) of this section.

* * * * *

(8)(i) * * *

(E) * * *

(*2*) For 2013, plot and display growth charts for patients 0–20 years, including body mass index, or paragraph (d)(8)(i)(E)(*1*) of this section.

(*3*) Beginning 2014, plot and display growth charts for patients 0–20 years, including body mass index.

(ii) * * *

(B) For 2013—(*1*) Subject to paragraph (c) of this section, more than 50 percent of all unique patients seen by the EP during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data; or

(*2*) The measure specified in paragraph (d)(8)(ii)(A) of this section.

(C) Beginning 2014, only the measure specified in paragraph (d)(8)(ii)(B)(*1*) of this section.

(iii) * * *

(B) For 2013, either of the following:

(*1*) The exclusion specified in paragraph (d)(8)(iii)(A) of this section.

(*2*) The exclusion for an EP who—

(*i*) Sees no patients 3 years or older is excluded from recording blood pressure;

(*ii*) Believes that all three vital signs of height/length, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them;

(*iii*) Believes that height/length and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or

(*iv*) Believes that blood pressure is relevant to their scope of practice, but height/length and weight are not, is excluded from recording height/length and weight.

(C) Beginning 2014, only the exclusion specified in paragraph (d)(8)(iii)(B)(*2*) of this section.

* * * * *

(10)(i) * * *

(B) Beginning 2013, this objective is reflected in the definition of a meaningful EHR user in § 495.4 and is no longer listed as an objective in this paragraph (d).

(ii) * * *

(B) Beginning 2013, this measure is reflected in the definition of a meaningful EHR user in § 495.4 and no longer listed as a measure in this paragraph (d).

* * * * *

(12)(i) * * *

(B) Beginning 2014, provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.

(ii) * * *

(B) Beginning 2014, subject to paragraph (c) of this section, more than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (available to the patient within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information.

(iii) * * *

(B) Beginning 2014, any EP who neither orders nor creates any of the information listed for inclusion as part of this measure.

* * * * *

(14)(i) * * *

(B) Beginning 2013, this objective is no longer required as part of the core set.

(ii) * * *

(B) Beginning 2013, this measure is no longer required as part of the core set.

* * * * *

(e) * * * Beginning 2014, an EP must meet five of the following objectives and associated measures, one of which must be either paragraph (e)(9) or (10) of this section unless the EP has an exclusion from five or more objectives in this paragraph (e), in which case the EP must meet all remaining objectives and associated measures in paragraph (e) of this section.

* * * * *

(5)(i) * * *

(B) Beginning 2014, this objective is no longer included in the menu set.

(ii) * * *

(B) Beginning 2014, this measure is no longer included in the menu set.

* * * * *

(9)(i) * * *

(B) Beginning 2013, capability to submit electronic data to immunization registries or immunization information systems and actual submission except where prohibited and according to applicable law and practice.

* * * * *

(10)(i) * * *

(B) Beginning 2013, capability to submit electronic syndromic surveillance data to public health agencies and actual submission except where prohibited and according to applicable law and practice.

* * * * *

(f) * * *

(1) * * *

(ii) * * *

(B) Subject to paragraph (c) of this section, more than 30 percent of medication orders created by the authorized providers of the eligible hospital or CAH for patients admitted to their inpatient or emergency departments (POS 21 or 23) during the EHR reporting period are recorded using computerized provider order entry, or the measure specified in paragraph (f)(1)(ii)(A) of this section.

* * * * *

(7) * * *

(i) * * *

(E) * * *

(*2*) For 2013, plot and display growth charts for patients 0–20 years, including body mass index, or paragraph (f)(*7*)(i)(E)(*1*) of this section.

(*3*) Beginning 2014, plot and display growth charts for patients 0–20 years, including body mass index.

(ii) * * *

(B) For 2013—(*1*) Subject to paragraph (c) of this section, more than 50 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data; or

(*2*) The measure specified in paragraph (f)(7)(ii)(A) of this section.

(C) Beginning 2014, only the measure specified in paragraph (f)(7)(ii)(B)(*1*) of this section.

* * * * *

(9) * * *

(i) * * *

(B) Beginning 2013, this objective is reflected in the definition of a meaningful EHR user in § 495.4 and no longer listed as an objective in this paragraph (f).

(ii) * * *

(B) Beginning 2013, this measure is reflected in the definition of a meaningful EHR user in § 495.4 and no longer listed as a measure in this paragraph (f).

* * * * *

(11) * * *

(i) * * *

(B) Beginning 2014, this objective is no longer required as part of the core set.

(ii) * * *

(B) Beginning 2014, this measure is no longer required as part of the core set.

(12) * * *

(i) * * *

(B) Beginning 2014, provide patients the ability to view online, download, and transmit information about a hospital admission.

(ii) * * *

(B) Beginning 2014, subject to paragraph (c) of this section, more than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge.

(iii) * * *

(B) Beginning 2014, this exclusion is no longer available.

* * * * *

(13) * * *

(i) * * *

(B) Beginning 2013, this objective is no longer required as part of the core set.

(ii) * * *

(B) Beginning 2013, this measure is no longer required as part of the core set.

* * * * *

(g) * * * Beginning 2014, eligible hospitals or CAHs must meet five of the following objectives and associated measures, one which must be specified in paragraph (g)(8), (9), or (10) of this section:

* * * * *

(8)(i) * * *

(B) Beginning 2013, Capability to submit electronic data to immunization registries or immunization information systems and actual submission except where prohibited and according to applicable law and practice.

(9)(i) * * *

(B) Beginning 2013, capability to submit electronic data on reportable (as required by State or local law) lab results to public health agencies and actual submission except where prohibited according to applicable law and practice.

(10)(i) * * *

(B) Beginning 2013, capability to submit electronic syndromic surveillance data to public health agencies and actual submission except where prohibited and according to applicable law and practice.

* * * * *

(h) *Stage 2 criteria for EPs*–(1) *General rule regarding Stage 2 criteria for meaningful use for EPs.* Except as specified in paragraph (h)(2) of this section, EPs must meet all objectives and associated measures of the Stage 2 criteria specified in paragraph (j) of this section and 3 objectives of the EP's choice from paragraph (k) of this section to meet the definition of a meaningful EHR user.

(2) *Exclusion for nonapplicable objectives.* (i) An EP may exclude a particular objective contained in paragraph (j) or (k) of this section, if the EP meets all of the following requirements:

(A) Must ensure that the objective in paragraph (j) or (k) of this section includes an option for the EP to attest that the objective is not applicable.

(B) Meets the criteria in the applicable objective that would permit the attestation.

(C) Attests.

(ii)(A) An exclusion will reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (j) of this section. For example, an EP that has an exclusion from one of the objectives in paragraph (j) of this section must meet 16 objectives from such paragraph to meet the definition of a meaningful EHR user.

(B) An exclusion does not reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (k) of this section unless four or more exclusions apply. For example, an EP that has an exclusion for one of the objectives in paragraph (k) of this section must meet three of the five nonexcluded objectives from such paragraph to meet the definition of a meaningful EHR user. If an EP has an exclusion for four of the objectives in paragraph (k) of this

section, then he or she must meet the remaining two nonexcluded objectives from such paragraph to meet the definition of a meaningful EHR user.

(i) *Stage 2 criteria for eligible hospitals and CAHs*–(1) *General rule regarding Stage 2 criteria for meaningful use for eligible hospitals or CAHs.* Except as specified in paragraph (i)(2) of this section, eligible hospitals and CAHs must meet all objectives and associated measures of the Stage 2 criteria specified in paragraph (l) of this section and three objectives of the eligible hospital's or CAH's choice from paragraph (m) of this section to meet the definition of a meaningful EHR user.

(2) *Exclusions for nonapplicable objectives.* (i) An eligible hospital or CAH may exclude a particular objective that includes an option for exclusion contained in paragraphs (l) or (m) of this section, if the hospital meets all of the following requirements:

(A) The hospital meets the criteria in the applicable objective that would permit an exclusion.

(B) The hospital so attests.

(ii)(A) An exclusion will reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (l) of this section. For example, an eligible hospital that has an exclusion from 1 of the objectives in paragraph (l) of this section must meet 15 objectives from such paragraph to meet the definition of a meaningful EHR user.

(B) An exclusion does not reduce (by the number of exclusions applicable) the number of objectives that would otherwise apply in paragraph (m) of this section. For example, an eligible hospital that has an exclusion for one of the objectives in paragraph (m) of this section must meet three of the five nonexcluded objectives from such paragraph to meet the definition of a meaningful EHR user.

(j) *Stage 2 core criteria for EPs.* An EP must satisfy the following objectives and associated measures, except those objectives and associated measures for which an EP qualifies for an exclusion under paragraph (h)(2) of this section specified in this paragraph (j).

(1)(i) *Objective.* Use computerized provider order entry for medication, laboratory, and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per State, local, and professional guidelines.

(ii) *Measures.* Subject to paragraph (c) of this section—

(A) More than 60 percent of medication orders created by the EP during the EHR reporting period are recorded using computerized provider order entry;

(B) More than 30 percent of laboratory orders created by the EP during the EHR reporting period are recorded using computerized provider order entry; and

(C) More than 30 percent of radiology orders created by the EP during the EHR reporting period are recorded using computerized provider order entry.

(iii) *Exclusions in accordance with paragraph (h)(2) of this section.* (A) For the measure specified in paragraph (j)(1)(ii)(A) of this section, any EP who writes fewer than 100 medication orders during the EHR reporting period.

(B) For the measure specified in paragraph (j)(1)(ii)(B) of this section, any EP who writes fewer than 100 laboratory orders during the EHR reporting period.

(C) For the measure specified in paragraph (j)(1)(ii)(C), any EP who writes fewer than 100 radiology orders during the EHR reporting period.

(2)(i) *Objective.* Generate and transmit permissible prescriptions electronically (eRx).

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all permissible prescriptions, or all prescriptions, written by the EP are queried for a drug formulary and transmitted electronically using Certified EHR Technology.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who—

(A) Writes fewer than 100 permissible prescriptions during the EHR reporting period; or (B) Does not have a pharmacy within their organization and there are no pharmacies that accept electronic prescriptions within 10 miles of the EP's practice location at the start of his or her EHR reporting period.

(3)(i) *Objective.* Record all of the following demographics:

(A) Preferred language.

(B) Sex.

(C) Race.

(D) Ethnicity.

(E) Date of birth.

(ii) *Measure.* More than 80 percent of all unique patients seen by the EP during the EHR reporting period have demographics recorded as structured data.

(4)(i) *Objective.* Record and chart changes in the following vital signs:

(A) Height/Length.

(B) Weight.

(C) Blood pressure (ages 3 and over).

(D) Calculate and display body mass index (BMI).

(E) Plot and display growth charts for patients 0–20 years, including body mass index.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 80 percent of all unique patients seen by the EP during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who—

(A) Sees no patients 3 years or older is excluded from recording blood pressure;

(B) Believes that all three vital signs of height/length, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them;

(C) Believes that height/length and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; or

(D) Believes that blood pressure is relevant to their scope of practice, but height/length and weight are not, is excluded from recording height/length and weight.

(5)(i) *Objective.* Record smoking status for patients 13 years old or older.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 80 percent of all unique patients 13 years old or older seen by the EP during the EHR reporting period have smoking status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who sees no patients 13 years old or older.

(6)(i) *Objective.* Use clinical decision support to improve performance on high priority health conditions.

(ii) *Measures.* (A) Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an EP's scope of practice or patient population, the clinical decision support interventions must be related to high-priority health conditions; and

(B) The EP has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section for paragraph (j)(6)(ii)(B) of this section.* An EP who writes fewer than 100 medication orders during the EHR reporting period.

(7)(i) *Objective.* Incorporate clinical lab test results into Certified EHR Technology as structured data.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 55 percent of all clinical lab tests results ordered by the EP during the EHR reporting period whose results are either in a positive/

negative affirmation or numerical format are incorporated in Certified EHR Technology as structured data.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who orders no lab tests whose results are either in a positive/negative affirmation or numerical format during the EHR reporting period.

(8)(i) *Objective.* Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

(ii) *Measure.* Generate at least one report listing patients of the EP with a specific condition.

(9)(i) *Objective.* Use clinically relevant information to identify patients who should receive reminders for preventive/follow-up care and send these patients the reminder, per patient preference.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 10 percent of all unique patients who have had two or more office visits with the EP within the 24 months before the beginning of the EHR reporting period were sent a reminder, per patient preference when available.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who has had no office visits in the 24 months before the beginning of the EHR reporting period.

(10)(i) *Objective.* Provide patients the ability to view online, download, and transmit their health information within 4 business days of the information being available to the EP.

(ii) *Measures.* (A) More than 50 percent of all unique patients seen by the EP during the EHR reporting period are provided timely (available to the patient within 4 business days after the information is available to the EP) online access to their health information subject to the EP's discretion to withhold certain information; and

(B) More than 5 percent of all unique patients seen by the EP during the EHR reporting period (or their authorized representatives) view, download or transmit to a third party their health information.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who—

(A) Neither orders nor creates any of the information listed for inclusion as part of the measures in paragraphs (j)(10)(ii)(A) and (B) of this section, except for ''Patient name'' and ''Provider's name and office contact information,'' is excluded from both paragraphs (j)(10)(ii)(A) and (B) of this section; or

(B) Conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period is excluded from paragraph (j)(10)(ii)(B) of this section.

(11)(i) *Objective.* Provide clinical summaries for patients for each office visit.

(ii) *Measure.* Subject to paragraph (c) of this section, clinical summaries provided to patients or patient-authorized representatives within 1 business day for more than 50 percent of office visits.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who has no office visits during the EHR reporting period.

(12)(i) *Objective.* Use clinically relevant information from Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.

(ii) *Measure.* Patient-specific education resources identified by Certified EHR Technology are provided to patients for more than 10 percent of all unique patients with office visits seen by the EP during the EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who has no office visits during the EHR reporting period.

(13)(i) *Objective.* The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.

(ii) *Measure.* Subject to paragraph (c) of this section, the EP performs medication reconciliation for more than 50 percent of transitions of care in which the patient is transitioned into the care of the EP.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who was not the recipient of any transitions of care during the EHR reporting period.

(14)(i) *Objective.* The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.

(ii) *Measures.* (A) Subject to paragraph (c) of this section, the EP that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals;

(B) Subject to paragraph (c) of this section, the EP that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 10 percent of such transitions and referrals either—

(*1*) Electronically transmitted using Certified EHR Technology to a recipient; or

(*2*) Where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network, and

(C) Subject to paragraph (c) of this section an EP must satisfy one of the following:

(*1*) Conducts one or more successful electronic exchanges of a summary of care record meeting the measure specified in paragraph (j)(14)(ii)(B) of this section with a recipient using technology to receive the summary of care record that was designed by a different EHR developer than the sender's EHR technology certified at 45 CFR 107.314(b)(2); or

(*2*) Conducts one or more successful tests with the CMS designated test EHR during the EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who transfers a patient to another setting or refers a patient to another provider less than 100 times during the EHR reporting period.

(15)(i) *Objective.* Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP that meets one or more of the following criteria:

(A) Does not administer any of the immunizations to any of the populations for which data is collected by their jurisdiction's immunization registry or immunization information system during the EHR reporting period.

(B) Operates in a jurisdiction for which no immunization registry or immunization information system is capable of accepting the specific standards required for Certified EHR Technology at the start of his or her EHR reporting period.

(C) Operates in a jurisdiction where no immunization registry or immunization information system provides information timely on capability to receive immunization data.

(D) Operates in a jurisdiction for which no immunization registry or immunization information system that is capable of accepting the specific standards required by Certified EHR Technology at the start of his or her EHR reporting period can enroll additional EPs.

(16)(i) *Objective.* Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

(ii) *Measure.* Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in Certified EHR Technology in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the EP's risk management process.

(17)(i) *Objective.* Use secure electronic messaging to communicate with patients on relevant health information.

(ii) *Measure.* A secure message was sent using the electronic messaging function of Certified EHR Technology by more than 5 percent of unique patients (or their authorized representatives) seen by the EP during the EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who meets one or more of the following criteria:

(A) Has no office visits during the EHR reporting period.

(B) Who conducts 50 percent or more of his or her patient encounters in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of their EHR reporting period.

(k) *Stage 2 menu set criteria for EPs.* An EP must meet 3 of the following objectives and associated measures, unless the EP has an exclusion from 4 or more objectives in this paragraph (k) of this section, in which case the EP must meet all remaining objectives and associated measures.

(1)(i) *Objective.* Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 10 percent of all tests whose result is one or more images ordered by the EP during the EHR reporting period are accessible through Certified EHR Technology.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who meets one or more of the following criteria.

(A) Orders less than 100 tests whose result is an image during the EHR reporting period.

(B) Has no access to electronic imaging results at the start of the EHR reporting period.

(2)(i) *Objective.* Record patient family health history as structured data.

(ii) *Measure.* More than 20 percent of all unique patients seen by the EP during the EHR reporting period have a structured data entry for one or more first-degree relatives.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who has no office visits during the EHR reporting period.

(3)(i) *Objective.* Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP that meets one or more of the following criteria:

(A) Is not in a category of providers who collect ambulatory syndromic surveillance information on their patients during the EHR reporting period.

(B) Operates in a jurisdiction for which no public health agency is capable of receiving electronic syndromic surveillance data in the specific standards required for Certified EHR Technology at the start of their EHR reporting period.

(C) Operates in a jurisdiction where no public health agency provides information timely on capability to receive syndromic surveillance data.

(D) Operates in a jurisdiction for which no public health agency that is capable of accepting the specific standards required by Certified EHR Technology at the start of their EHR reporting period can enroll additional EPs.

(4)(i) *Objective.* Capability to identify and report cancer cases to a public health central cancer registry, except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of cancer case information from Certified EHR Technology to a public health central cancer registry for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who meets one or more of the following—

(A) Does not diagnose or directly treat cancer.

(B) Operates in a jurisdiction for which no public health agency is capable of receiving electronic cancer case information in the specific standards required for Certified EHR Technology at the start of their EHR reporting period.

(C) Operates in a jurisdiction where no public health agency provides information timely on capability to receive electronic cancer case information.

(D) Operates in a jurisdiction for which no public health agency that is capable of receiving electronic cancer case information in the specific standards required for Certified EHR Technology at the beginning of their EHR reporting period can enroll additional EPs.

(5)(i) *Objective.* Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of specific case information from Certified EHR Technology to a specialized registry for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (h)(2) of this section.* Any EP who meets one or more of the following criteria:

(A) Does not diagnose or directly treat any disease associated with a specialized registry sponsored by a national specialty society for which the EP is eligible, or the public health agencies in their jurisdiction;

(B) Operates in a jurisdiction for which no specialized registry sponsored by a public health agency or by a national specialty society for which the EP is eligible is capable of receiving electronic specific case information in the specific standards required by Certified EHR Technology at the beginning of their EHR reporting period;

(C) Operates in a jurisdiction where no public health agency or national specialty society for which the EP is eligible provides information timely on capability to receive information into their specialized registries; or

(D) Operates in a jurisdiction for which no specialized registry sponsored by a public health agency or by a national specialty society for which the EP is eligible that is capable of receiving electronic specific case information in the specific standards required by

Certified EHR Technology at the beginning of his or her EHR reporting period can enroll additional EPs.

(6)(i) *Objective.* Record electronic notes in patient records.

(ii) *Measure.* Enter at least one electronic progress note created, edited, and signed by an EP for more than 30 percent of unique patients with at least one office visit during the EHR reporting period. The text of the electronic note must be text-searchable and may contain drawings and other content.

(l) *Stage 2 core criteria for eligible hospitals or CAHs.* An eligible hospital or CAH must meet the following objectives and associated measures except those objectives and associated measures for which an eligible hospital or CAH qualifies for an exclusion under paragraph (i)(2) of this section.

(1)(i) *Objective.* Use computerized provider order entry for medication, laboratory, and radiology orders directly entered by any licensed healthcare professional who can enter orders into the medical record per State, local, and professional guidelines.

(ii) *Measures.* Subject to paragraph (c) of this section, more than—

(A) Sixty percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using computerized provider order entry,

(B) Thirty percent of laboratory orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using computerized provider order entry, and

(C) Thirty percent of radiology orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period are recorded using computerized provider order entry.

(2)(i) *Objective.* Record all of the following demographics:

(A) Preferred language.

(B) Sex.

(C) Race.

(D) Ethnicity.

(E) Date of birth.

(F) Date and preliminary cause of death in the event of mortality in the eligible hospital or CAH.

(ii) *Measure.* More than 80 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have demographics recorded as structured data.

(3)(i) *Objective.* Record and chart changes in the following vital signs:

(A) Height/Length.

(B) Weight.

(C) Blood pressure (ages 3 and over).

(D) Calculate and display body mass index (BMI).

(E) Plot and display growth charts for patients 0–20 years, including body mass index.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 80 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have blood pressure (for patients age 3 and over only) and height/length and weight (for all ages) recorded as structured data.

(4)(i) *Objective.* Record smoking status for patients 13 years old or older.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 80 percent of all unique patients 13 years old or older admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have smoking status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that admits no patients 13 years old or older to their inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

(5)(i) *Objective.* Use clinical decision support to improve performance on high priority health conditions.

(ii) *Measures.* (A) Implement five clinical decision support interventions related to four or more clinical quality measures at a relevant point in patient care for the entire EHR reporting period. Absent four clinical quality measures related to an eligible hospital or CAH's patient population, the clinical decision support interventions must be related to high-priority health conditions; and

(B) The eligible hospital or CAH has enabled and implemented the functionality for drug-drug and drug-allergy interaction checks for the entire EHR reporting period.

(6)(i) *Objective.* Incorporate clinical lab test results into Certified EHR Technology as structured data.

(ii) *Measure.* More than 55 percent of all clinical lab tests results ordered by authorized providers of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period whose results are either in a positive/negative affirmation or numerical format are incorporated in Certified EHR Technology as structured data.

(7)(i) *Objective.* Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach.

(ii) *Measure.* Generate at least one report listing patients of the eligible hospital or CAH with a specific condition.

(8)(i) *Objective.* Provide patients the ability to view online, download, and transmit information about a hospital admission.

(ii) *Measures.* (A) More than 50 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH have their information available online within 36 hours of discharge; and

(B) More than 5 percent of all patients who are discharged from the inpatient or emergency department (POS 21 or 23) of an eligible hospital or CAH (or their authorized representative) view, download or transmit to a third party their information during the EHR reporting period.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that is located in a county that does not have 50 percent or more of its housing units with 3Mbps broadband availability according to the latest information available from the FCC on the first day of the EHR reporting period is excluded from paragraph (l)(8)(ii)(B) of this section.

(9)(i) *Objective.* Use clinically relevant information from Certified EHR Technology to identify patient-specific education resources and provide those resources to the patient.

(ii) *Measure.* More than 10 percent of all unique patients admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) are provided patient-specific education resources identified by Certified EHR Technology.

(10)(i) *Objective.* The eligible hospital or CAH that receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.

(ii) *Measure.* Subject to paragraph (c) of this section, the eligible hospital or CAH performs medication reconciliation for more than 50 percent of transitions of care in which the patient is admitted to the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23).

(11)(i) *Objective.* The eligible hospital or CAH that transitions their patient to another setting of care or provider of care or refers their patient to another provider of care provides a summary care record for each transition of care or referral.

(ii) *Measures.* (A) Subject to paragraph (c) in this section, the eligible hospital or CAH that transitions or refers their patient to another setting of care or provider of care provides a summary of care record for more than 50 percent of transitions of care and referrals,

(B) Subject to paragraph (c) in this section, the eligible hospital or CAH that transitions their patient to another setting of care or provider of care provides a summary of care record for more than 10 percent of such transitions and referrals either—

(*1*) Electronically transmitted using Certified EHR Technology to a recipient; or

(*2*) Where the recipient receives the summary of care record via exchange facilitated by an organization that is a NwHIN Exchange participant or in a manner that is consistent with the governance mechanism ONC establishes for the nationwide health information network; and

(C) Subject to paragraph (c) of this section an eligible hospital or CAH must satisfy one of the following:

(*1*) Conducts one or more successful electronic exchanges of a summary of care record meeting the measure specified in paragraph (l)(11)(ii)(B) of this section with a recipient using technology to receive the summary of care record that was designed by a different EHR developer than the sender's EHR technology certified at 45 CFR 107.314(b)(2); or

(*2*) Conducts one or more successful tests with the CMS designated test EHR during the EHR reporting period.

(12)(i) *Objective.* Capability to submit electronic data to immunization registries or immunization information systems except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of electronic immunization data from Certified EHR Technology to an immunization registry or immunization information system for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that meets one or more of the following criteria:

(A) The eligible hospital or CAH does not administer any of the immunizations to any of the populations for which data is collected by their jurisdiction's immunization registry or immunization information system during the EHR reporting period.

(B) The eligible hospital or CAH operates in a jurisdiction for which no immunization registry or immunization information system is capable of accepting the specific standards required for Certified EHR Technology at the start of their EHR reporting period.

(C) The eligible hospital or CAH operates in a jurisdiction where no immunization registry or immunization information system provides information timely on capability to receive immunization data.

(D) Operates in a jurisdiction for which no immunization registry or immunization information system that is capable of accepting the specific standards required by Certified EHR Technology at the start of their EHR reporting period can enroll additional eligible hospitals or CAHs.

(13)(i) *Objective.* Capability to submit electronic reportable laboratory results to public health agencies, where except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of electronic reportable laboratory results from Certified EHR Technology to a public health agency for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that meets one or more of the following criteria:

(A) Operates in a jurisdiction for which no public health agency is capable of receiving electronic reportable laboratory results in the specific standards required for Certified EHR Technology at the start of their EHR reporting period.

(B) Operates in a jurisdiction for which no public health agency provides information timely on capability to receive electronic reportable laboratory results.

(C) Operates in a jurisdiction for which no public health agency that is capable of accepting the specific standards required by Certified EHR Technology at the start of their EHR reporting period can enroll additional eligible hospitals or CAHs.

(14)(i) *Objective.* Capability to submit electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

(ii) *Measure.* Successful ongoing submission of electronic syndromic surveillance data from Certified EHR Technology to a public health agency for the entire EHR reporting period.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that meets one or more of the following criteria:

(A) Does not have an emergency or urgent care department.

(B) Operates in a jurisdiction for which no public health agency is capable of receiving electronic syndromic surveillance data in the specific standards required for Certified EHR Technology at the start of their EHR reporting period or can enroll additional eligible hospitals or CAHs.

(C) Operates in a jurisdiction for which no public health agency provides information timely on capability to receive syndromic surveillance data.

(D) Operates in a jurisdiction for which no public health agency that is capable of accepting the specific standards required by Certified EHR Technology at the start of their EHR reporting period can enroll additional eligible hospitals or CAHs.

(15)(i) *Objective.* Protect electronic health information created or maintained by the Certified EHR Technology through the implementation of appropriate technical capabilities.

(ii) *Measure.* Conduct or review a security risk analysis in accordance with the requirements under 45 CFR 164.308(a)(1), including addressing the encryption/security of data stored in Certified EHR Technology in accordance with requirements under 45 CFR 164.312(a)(2)(iv) and 45 CFR 164.306(d)(3), and implement security updates as necessary and correct identified security deficiencies as part of the eligible hospital's or CAH's risk management process.

(16)(i) *Objective.* Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).

(ii) *Measure.* Subject to paragraph (c) of this section, more than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH with an average daily inpatient census of fewer than 10 patients.

(m) *Stage 2 menu set criteria for eligible hospitals or CAHs.* An eligible hospital or CAH must meet the measure criteria for three of the following objectives and associated measures.

(1)(i) *Objective.* Record whether a patient 65 years old or older has an advance directive.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 50 percent of all unique patients 65 years old or older admitted to the eligible hospital's or CAH's inpatient department (POS 21) during the EHR reporting period have an indication of an advance directive status recorded as structured data.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that admits no patients age 65 years old or older during the EHR reporting period.

(2)(i) *Objective.* Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through Certified EHR Technology.

(ii) *Measure.* Subject to paragraph (c) of this section, more than 10 percent of all tests whose result is an image ordered by an authorized provider of the eligible hospital or CAH for patients admitted to its inpatient or emergency department (POS 21 or 23) during the EHR reporting period are accessible through Certified EHR Technology.

(3)(i) *Objective.* Record patient family health history as structured data.

(ii) *Measure.* More than 20 percent of all unique patients admitted to the eligible hospital or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period have a structured data entry for one or more first-degree relatives.

(4)(i) *Objective.* Generate and transmit permissible discharge prescriptions electronically (eRx).

(ii) *Measure.* More than 10 percent of hospital discharge medication orders for permissible prescriptions (for new, changed and refilled prescriptions) are queried for a drug formulary and transmitted electronically using Certified EHR Technology.

(iii) *Exclusion in accordance with paragraph (i)(2) of this section.* Any eligible hospital or CAH that does not have an internal pharmacy that can accept electronic prescriptions and there are no pharmacies that accept electronic prescriptions within 10 miles at the start of its EHR reporting period.

(5)(i) *Objective.* Record electronic notes in patient records.

(ii) *Measure:* Enter at least one electronic progress note created, edited and signed by an authorized provider of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) for more than 30 percent of unique patients admitted to the eligible hospital or CAH's inpatient or emergency department during the EHR reporting period. The text of the electronic note must be text-searchable and may contain drawings and other content.

(6)(i) *Objective.* Provide structured electronic lab results to ambulatory providers.

(ii) *Measure.* Hospital labs send structured electronic clinical lab results to the ordering provider for more than 20 percent of electronic lab orders received.

■ 9. Section 495.8 is amended as follows:

■ A. Revising paragraph (a)(2)(i)(B) and (a)(2)(ii).

■ B. Revising paragraphs (b)(2)(i)(B) and (b)(2)(ii).

§ 495.8 Demonstration of meaningful use criteria.

(a) * * *

(2) * * *

(i) * * *

(B) Satisfied the required objectives and associated measures under § 495.6 for the EP's stage of meaningful use.

* * * * *

(ii) *Reporting clinical quality information.* Successfully report the clinical quality measures selected by CMS to CMS or the States, as applicable, in the form and manner specified by CMS or the States, as applicable.

* * * * *

(b) * * *

(2) * * *

(i) * * *

(B) Satisfied the required objectives and associated measures under § 495.6 for the eligible hospital or CAH's stage of meaningful use.

* * * * *

(ii) *Reporting clinical quality information.* Successfully report the clinical quality measures selected by CMS to CMS or the States, as applicable, in the form and manner specified by CMS or the States, as applicable.

* * * * *

§ 495.10 [Amended]

■ 10. In § 495.10, paragraph (a)(3) is amended by removing the phrase ''Business address and'' and adding in its place the phrase ''Business address, business email address, and''.

■ 11. Section 495.100 is amended by revising the definitions of ''Qualifying CAH,'' ''Qualifying eligible professional (qualifying EP),'' and ''Qualifying hospital'' to read as follows:

§ 495.100 Definitions.

* * * * *

Qualifying CAH means a CAH that is a meaningful EHR user for the EHR reporting period applicable to a payment year or payment adjustment year in which a cost reporting period begins.

Qualifying eligible professional (qualifying EP) means an EP who is a meaningful EHR user for the EHR reporting period applicable to a payment or payment adjustment year and who is not a hospital-based EP, as determined for that payment or payment adjustment year.

Qualifying hospital means an eligible hospital that is a meaningful EHR user for the EHR reporting period applicable to a payment or payment adjustment year.

■ 10. Section 495.102 is amended as follows:

■ A. Revising paragraphs (c), (d)(1), and (d)(2)(iii).

■ B. Adding paragraph (d)(2)(iv).

■ C. Revising paragraph (d)(3).

■ D. Adding paragraphs (d)(4) and (5).

The revisions and additions read as follows:

§ 495.102 Incentive payments to EPs.

* * * * *

(c) *Increase in incentive payment limit for EPs who predominantly furnish services in a geographic HPSA.* In the case of a qualifying EP who furnishes more than 50 percent of his or her covered professional services during the payment year in a geographic HPSA that is designated as of December 31 of the prior year, the incentive payment limit determined under paragraph (b) of this section is to be increased by 10 percent.

(d) *Payment adjustment effective in CY 2015 and subsequent years for nonqualifying EPs.* (1)(i) Subject to paragraphs (d)(3) and (4) of this section, beginning 2015, for covered professional services furnished by an EP who is not hospital-based, and who is not a qualifying EP by virtue of not being a meaningful EHR user (for the EHR reporting period applicable to the payment adjustment year), the payment amount for such services is equal to the product of the applicable percent specified in paragraph (d)(2) of this section and the Medicare physician fee schedule amount for such services.

(2) * * *

(iii) For 2017, 97 percent.

(iv) For 2018 and subsequent years, 97 percent, except as provided in paragraph (d)(3) of this section.

(3) *Decrease in applicable percent in certain circumstances.* If, beginning CY 2018 and for each subsequent year, the Secretary finds that the proportion of EPs who are meaningful EHR users is less than 75 percent, the applicable percent must be decreased by 1 percentage point for EPs from the applicable percent in the preceding year, but in no case will the applicable percent be less than 95 percent.

(4) *Exceptions.* The Secretary may, on a case-by-case basis, exempt an EP from the application of the payment adjustment under paragraph (d)(1) of this section if the Secretary determines that compliance with the requirement for being a meaningful EHR user would result in a significant hardship for the EP. To be considered for an exception, an EP must submit, in the manner specified by CMS, an application

demonstrating that it meets one or more of the criteria in this paragraph (d)(4) unless otherwise specified in the criteria. The Secretary's determination to grant an EP an exemption may be renewed on an annual basis, provided that in no case may an EP be granted an exemption for more than 5 years.

(i) During any 90-day period from the beginning of the year that is 2 years before the payment adjustment year to July 1 of the year preceding the payment adjustment year, the EP was located in an area without sufficient Internet access to comply with the meaningful use objectives requiring internet connectivity, and faced insurmountable barriers to obtaining such internet connectivity. Applications requesting this exception must be submitted no later than July 1 of the year before the applicable payment adjustment year.

(ii) The EP has been practicing for less than 2 years.

(iii)(A) During the calendar year that is 2 calendar years before the payment adjustment year, the EP that has previously demonstrated meaningful use faces extreme and uncontrollable circumstances that prevent it from becoming a meaningful EHR user. Applications requesting this exception must be submitted no later than July 1 of the year before the applicable payment adjustment year.

(B) During the calendar year preceding the payment adjustment year, the EP that has not previously demonstrated meaningful use faces extreme and uncontrollable circumstances that prevent it from becoming a meaningful EHR user. Applications requesting this exception must be submitted by July 1 of the year before the applicable payment adjustment year.

(iv) An EP may request an exception through an application submitted by July 1 of the year before the applicable payment adjustment year due to difficulty in meeting meaningful use based on any one of the following during the period that begins 2 calendar years before the payment adjustment year through the application deadline:

(A) The EP practices at multiple locations and can demonstrate inability to control the availability of Certified EHR Technology at one such practice location or a combination of practice locations, and where the location or locations constitute more than 50 percent of their patient encounters.

(B) The EP can demonstrate difficulty in meeting meaningful use on the basis of lack of face-to-face or telemedicine interaction with patients and lack of need for follow up with patients.

(C) The EP has a primary specialty listed in PECOS as anesthesiology, radiology or pathology 6 months prior to the first day of the payment adjustments that would otherwise apply. Such an EP may be deemed to qualify for this exception, subject to the 5-year limit that applies to all exceptions under this paragraph.

(5) *Payment adjustments not applicable to hospital-based EPs.* No payment adjustment under paragraphs (d)(1) through (3) of this section may be made in the case of a hospital-based eligible professional, as defined in § 495.4.

§ 495.106 [Amended]

■ 12. In § 495.106, paragraph (e) is amended by removing the phrase ''for a payment year'' and adding the phrase ''for a payment adjustment year'' in its place.

■ 13. Section 495.200 is amended by—

■ A. Adding definitions for ''MA payment adjustment year,'' and ''Potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals'' in alphabetical order.

■ B. Revising paragraph (5) of the definition of ''Qualifying MA EP''.

The additions and revision read as follows:

§ 495.200 Definitions.

* * * * *

MA payment adjustment year means—(1) For qualifying MA organizations that receive an MA EHR incentive payment for at least 1 payment year, calendar years beginning with CY 2015.

(2) For MA-affiliated eligible hospitals, the applicable EHR reporting period for purposes of determining whether the MA organization is subject to a payment adjustment is the federal fiscal year ending in the MA payment adjustment year.

(3) For MA EPs, the applicable EHR reporting period for purposes of determining whether the MA organization is subject to a payment adjustment is the calendar year concurrent with the payment adjustment year.

* * * * *

Potentially qualifying MA EPs and potentially qualifying MA-affiliated eligible hospitals are defined for purposes of this subpart in § 495.202(a)(4).

* * * * *

Qualifying MA EP * * *

(5) Is not a ''hospital-based EP'' (as defined in § 495.4 of this part) and in determining whether 90 percent or more of his or her covered professional services were furnished in a hospital setting, only covered professional services furnished to MA plan enrollees of the qualifying MA organization, in lieu of FFS patients, will be considered.

* * * * *

■ 14. Section 495.202 is amended as follows:

■ A. Revising paragraph (b)(1).

■ B. In paragraph (b)(2) introductory text, removing the cross-reference ''(b)(3)'' and adding the cross-reference ''(4)'' in its place.

■ C. Revising paragraph (b)(2)(iii).

■ D. Redesignating paragraphs (b)(3) and (4) as paragraphs (b)(4) and (5).

■ E. Adding a new paragraph (b)(3).

■ F. Revising newly redesignated paragraph (b)(4).

■ G. Revising newly redesignated paragraphs (b)(5)(i) and (ii).

The addition and revisions read as follows:

§ 495.202 Identification of qualifying MA organizations, MA–EPs and MA-affiliated eligible hospitals.

* * * * *

(b) * * *

(1) A qualifying MA organization, as part of its initial bid starting with plan year 2012, must make a preliminary identification of MA EPs and MA-affiliated eligible hospitals that the MA organization believes will be qualifying MA EPs and MA-affiliated eligible hospitals for which the organization is seeking incentive payments for the current plan year.

(2) * * *

(iii) NPI or CCN.

* * * * *

(3) When reporting under either paragraph (b)(1) or (4) of this section for purposes of receiving an incentive payment, a qualifying MA organization must also indicate whether more than 50 percent of the covered Medicare professional services being furnished by a qualifying MA EP to MA plan enrollees of the MA organization are being furnished in a designated geographic HPSA (as defined in § 495.100 of this part).

(4) Final identification of qualifying and potentially qualifying, as applicable, MA EPs and MA-affiliated eligible hospitals must be made within 2 months of the close of the payment year or the EHR reporting period that applies to the payment adjustment year as defined in § 495.200.

(5) * * *

(i) Identify all MA EPs and MA-affiliated eligible hospitals of the MA organization that the MA organization believes will be either qualifying or potentially qualifying;

(ii) Include information specified in paragraph (b)(2)(i) through (iii) of this section for each professional or hospital; and

* * * * *

■ 15. Section 495.204 is amended as follows:

■ A. Revising the section heading.

■ B. Revising paragraphs (b)(2) and (b)(4) introductory text, and (b)(4)(i) and (ii).

■ C. Redesignating paragraph (e) as paragraph (f).

■ D. Adding new paragraphs (e), (f)(5), and (g).

The revisions and additions read as follows:

§ 495.204 Incentive payments to qualifying MA organizations for qualifying MA–EPs and qualifying MA-affiliated eligible hospitals.

* * * * *

(b) * * *

(2) The qualifying MA organization must report to CMS within 2 months of the close of the calendar year, the aggregate annual amount of revenue attributable to providing services that would otherwise be covered as professional services under Part B received by each qualifying MA EP for enrollees in MA plans of the MA organization in the payment year.

* * * * *

(4) CMS requires the qualifying MA organization to develop a methodological proposal for estimating the portion of each qualifying MA EP's salary or revenue attributable to providing services that would otherwise be covered as professional services under Part B to MA plan enrollees of the MA organization in the payment year. The methodological proposal—

(i) Must be approved by CMS; and

(ii) May include an additional amount related to overhead, where appropriate, estimated to account for the MA-enrollee related Part B practice costs of the qualifying MA EP.

* * * * *

(e) *Potential increase in incentive payment for furnishing services in a geographic HPSA.* In the case of a qualifying MA EP who furnishes more than 50 percent of his or her covered professional services to MA plan enrollees of the qualifying MA organization during a payment year in a geographic HPSA, the maximum amounts referred to in paragraph (b)(3) of this section are increased by 10 percent.

(f) * * *

(5) If an MA EP, or entity that employs an MA EP, or in which an MA EP has a partnership interest, MA-affiliated eligible hospital, or other party contracting with the MA organization, fails to comply with an audit request to produce applicable documents or data, CMS recoups all or a portion of the incentive payment, based on the lack of applicable documents or data.

(g) *Coordination of payment with FFS or Medicaid EHR incentive programs.* (1) If, after payment is made to an MA organization for an MA EP, it is determined that the MA EP is eligible for the full incentive payment under the Medicare FFS EHR Incentive Program or has received a payment under the Medicaid EHR Incentive Program, CMS recoups amounts applicable to the given MA EP from the MA organization's monthly MA payment, or otherwise recoups the applicable amounts.

(2) If, after payment is made to an MA organization for an MA-affiliated eligible hospital, it is determined that the hospital is ineligible for the incentive payment under the MA EHR Incentive Program, or has received a payment under the Medicare FFS EHR Incentive Program, or if it is determined that all or part of the payment should not have been made on behalf of the MA-affiliated eligible hospital, CMS recoups amounts applicable to the given MA-affiliated eligible hospital from the MA organization's monthly MA payment, or otherwise recoups the applicable amounts.

■ 16. Section 495.208 is amended as follows:

■ A. Redesignating paragraphs (a) through (c) as paragraphs (d) through (f).

■ B. Adding new paragraphs (a) through (c).

The additions read as follows:

§ 495.208 Avoiding duplicate payment.

(a) CMS requires a qualifying MA organization that registers MA EPs for the purpose of participating in the MA EHR Incentive Program to notify each of the MA EPs for which it is claiming an incentive payment that the MA organization intends to claim, or has claimed, the MA EP for the current plan year under the MA EHR Incentive Program.

(b) The notice must make clear that the MA EP may still directly receive an EHR incentive payment if the MA EP is entitled to a full incentive payment under the FFS portion of the EHR Incentive Program, or if the MA EP registered to participate under the Medicaid portion of the EHR Incentive Program and is entitled to payment under that program—in both of which cases no payment would be made for the EP under the MA EHR incentive program.

(c) An attestation by the qualifying MA organization that the qualifying MA organization provided notice to its MA EPs in accordance with this section must be required at the time that meaningful use attestations are due with respect to MA EPs for the payment year.

* * * * *

■ 17. Section 495.210 is amended by revising paragraphs (b) and (c) to read as follows:

§ 495.210 Meaningful EHR user attestation

* * * * *

(b) Qualifying MA organizations are required to attest within 2 months after the close of a calendar year whether each qualifying MA EP is a meaningful EHR user.

(c) Qualifying MA organizations are required to attest within 2 months after close of the FY whether each qualifying MA-affiliated eligible hospital is a meaningful EHR user.

■ 18. Add § 495.211 to subpart C to read as follows:

§ 495.211 Payment adjustments effective for 2015 and subsequent MA payment years with respect to MA EPs and MA-affiliated eligible hospitals.

(a) *In general.* Beginning for MA payment adjustment year 2015, payment adjustments set forth in this section are made to prospective payments (issued under section 1853(a)(1)(A) of the Act) of qualifying MA organizations that previously received incentive payments under the MA EHR Incentive Program, if all or a portion of the MA–EPs and MA-affiliated eligible hospitals that would meet the definition of qualifying MA–EPs or qualifying MA-affiliated eligible hospitals (but for their demonstration of meaningful use) are not meaningful EHR users.

(b) *Adjustment based on payment adjustment year.* The payment adjustment is calculated based on the payment adjustment year.

(c) *Separate application of adjustments for MA EPs and MA-affiliated eligible hospitals.* The payment adjustments identified in paragraphs (d) and (e) of this section are applied separately. Paragraph (d) of this section applies only to qualifying MA organizations that received payment for any MA payment year for qualifying MA EPs under § 495.204. Paragraph (e) of this section applies only to qualifying MA organizations that received payment for any MA payment year for qualifying MA-affiliated eligible hospitals under § 495.204.

(d) *Payment adjustments effective for 2015 and subsequent years with respect to MA EPs.* (1) For payment adjustment year 2015, and subsequent payment

adjustment years, if a qualifying MA EP is not a meaningful EHR user during the payment adjustment year, CMS—

(i) Determines a payment adjustment based on data from the payment adjustment year; and

(ii) Collects the payment adjustment owed by adjusting a subsequent year's prospective payment or payments (issued under section 1853(a)(1)(A) of the Act), or by otherwise collecting the payment adjustment, if, in the year of collection, the MA organization does not have an MA contract with CMS.

(2) Beginning for payment adjustment year 2015, a qualifying MA organization that previously received incentive payments must, for each payment adjustment year, report to CMS the following:

[the total number of potentially qualifying MA EPs]/[(the total number of potentially qualifying MA EPs) + (the total number of qualifying MA EPs)].

(3) The monthly prospective payment amount paid under section 1853(a)(1)(A) of the Act for the payment adjustment year is adjusted by the product of—

(i) The percent calculated in accordance with paragraph (d)(2) of this section;

(ii) The Medicare Physician Expenditure Proportion percent, which is CMS's estimate of proportion of expenditures under Parts A and B that are not attributable to Part C that are attributable to expenditures for physicians' services, adjusted for the proportion of expenditures that are provided by EPs that are neither qualifying nor potentially qualifying MA EPs with respect to a qualifying MA organization; and

(iii) The applicable percent identified in paragraph (d)(4) of this section.

(4) *Applicable percent.* The applicable percent is as follows:

(i) For 2015, 1 percent;

(ii) For 2016, 2 percent;

(iii) For 2017, 3 percent.

(iv) For 2018, 3 percent, except, in the case described in paragraph (d)(4)(vi) of this section, 4 percent.

(v) For 2019 and each subsequent year, 3 percent, except, in the case described in paragraph (d)(4)(vi) of this section, the percent from the prior year plus 1 percent. In no case will the applicable percent be higher than 5 percent.

(vi) Beginning with payment adjustment year 2018, if the percentage in paragraph (d)(2) of this section is more than 25 percent, the applicable percent is increased in accordance with paragraphs (d)(4)(iv) and (v) of this section.

(e) *Payment adjustments effective for 2015 and subsequent years with respect to MA-affiliated eligible hospitals.* (1)(i) The payment adjustment set forth in this paragraph (e) applies if a qualifying MA organization that previously received an incentive payment (or a potentially qualifying MA-affiliated eligible hospital on behalf of its qualifying MA organization) attests that a qualifying MA-affiliated eligible hospital is not a meaningful EHR user for a payment adjustment year.

(ii) The payment adjustment is calculated by multiplying the qualifying MA organization's monthly prospective payment for the payment adjustment year under section 1853(a)(1)(A) of the Act by the percent set forth in paragraph (e)(2) of this section.

(2) The percent set forth in this paragraph (e) is the product of—

(i) The percentage point reduction to the applicable percentage increase in the market basket index for the relevant Federal fiscal year as a result of § 412.64(d)(3) of this chapter;

(ii) The Medicare Hospital Expenditure Proportion percent specified in paragraph (e)(3) of this section; and

(iii) The percent of qualifying and potentially qualifying MA-affiliated eligible hospitals that are not meaningful EHR users. Qualifying MA organizations are required to report to CMS

[the number of potentially qualifying MA-affiliated eligible hospitals]/[(the total number of potentially qualifying MA-affiliated eligible hospitals) + (the total number of qualifying MA-affiliated eligible hospitals)].

(3) The Medicare Hospital Expenditure Proportion for a year is the Secretary's estimate of expenditures under Parts A and B that are not attributable to Part C, that are attributable to expenditures for inpatient hospital services, adjusted for the proportion of expenditures that are provided by hospitals that are neither qualifying nor potentially qualifying MA-affiliated eligible hospitals with respect to a qualifying MA organization.

■ 19. Section 495.302 is amended as follows:

■ A. In the definition of ''Adopt, implement or upgrade,'' by revising paragraph (1).

■ B. In the definition of ''Children's hospital,'' by revising paragraph (1), redesignating paragraph (2) as paragraph (3), and adding a new paragraph (2).

■ C. In the definition of ''Practices predominantly,'' by removing the phrase ''in the most recent calendar year'' and adding the phrase ''(within the most recent calendar year or, as an optional State alternative beginning for payment year 2013, within the 12-month period preceding attestation)''.

The revisions and addition read as follows:

§ 495.302 Definitions.

* * * * *

Adopt, implement or upgrade * * *

(1) Acquire, purchase, or secure access to certified EHR technology capable of meeting meaningful use requirements;

* * * * *

Children's hospital * * *

(1) Has a CMS certification number (CCN), (previously known as the Medicare provider number), that has the last 4 digits in the series 3300–3399; or

(2) Does not have a CCN but has been provided an alternative number by CMS for purposes of enrollment in the Medicaid EHR Incentive Program as a children's hospital and;

* * * * *

■ 20. Section 495.304 is amended as follows:

■ A. In paragraphs (c)(1) and (2), by removing the phrase ''individuals receiving Medicaid'' and adding the phrase '' individuals enrolled in a Medicaid program'' in its place.

■ B. Adding paragraph (f).

The addition reads as follows:

§ 495.304 Medicaid provider scope and eligibility.

* * * * *

(f) *Further patient volume requirements for the Medicaid EP.* For payment year 2013 and all subsequent payment years, at least one clinical location used in the calculation of patient volume must have Certified EHR Technology—

(1) During the payment year for which the EP attests to having adopted, implemented or upgraded Certified EHR Technology (for the first payment year); or

(2) During the payment year for which the EP attests it is a meaningful EHR user.

■ 21. Section 495.306 is amended as follows;

■ A. Revising paragraphs (b), (c)(1)(i), (c)(2)(i), (c)(3)(i), (d)(1)(i)(A), (d)(1)(ii)(A), (d)(2)(i)(A), (d)(2)(ii)(A), and (e)(1) introductory text.

■ B. In paragraph (e)(1)(i), by removing ''; or'' and adding a period in its place.

■ C. Adding paragraph (e)(1)(iii).

■ D. Revising paragraph (e)(2)(i) introductory text.

■ E. In paragraph (e)(2)(i)(A), by removing ''; or'' and adding a period in its place.

■ F. Adding paragraph (e)(2)(i)(C).
■ G. Revising paragraph (e)(2)(ii) introductory text.
■ H. In paragraph (e)(2)(ii)(A), by removing ''; or'' and adding a period in its place.
■ I. Adding paragraph (e)(2)(ii)(C).
■ J. Revising paragraph (e)(3) introductory text.
■ K. In paragraphs (e)(3)(i) and (ii), by removing the semicolon and adding a period in its place.
■ L. In paragraph (e)(3)(iii), by removing ''; or'' and adding a period in its place.
■ M. Redesignating paragraphs (e)(3)(iii) and (e)(3)(iv) as paragraphs (e)(3)(iv) and (e)(3)(v).
■ N. Adding a new paragraph (e)(3)(iii).

The revisions and additions read as follows:

§ 495.306 Establishing patient volume.

* * * * *

(b) *State option(s) through SMHP.* (1) A State must submit through the SMHP the option or options it has selected for measuring patient volume.

(2)(i) A State must select the method described in either paragraph (c) or paragraph (d) of this section (or both methods).

(ii) Under paragraphs (c)(1)(i), (c)(2)(i), (c)(3)(i), (d)(1)(i), and (d)(2)(i) of this section, States may choose whether to allow eligible providers to calculate total Medicaid or total needy individual patient encounters in any representative continuous 90-day period in the 12 months preceding the EP or eligible hospital's attestation or based upon a representative, continuous 90-day period in the calendar year preceding the payment year for which the EP or eligible hospital is attesting.

(3) In addition, or as an alternative to the method selected in paragraph (b)(2) of this section, a State may select the method described in paragraph (g) of this section.

(c) * * *

(1) * * *

(i) The total Medicaid patient encounters in any representative, continuous 90-day period in the calendar year preceding the EP's payment year, or in the 12 months before the EP's attestation; by

* * * * *

(2) * * *

(i) The total Medicaid encounters in any representative, continuous 90-day period in the fiscal year preceding the hospitals' payment year or in the 12 months before the hospital's attestation; by

* * * * *

(3) * * *

(i) The total needy individual patient encounters in any representative, continuous 90-day period in the calendar year preceding the EP's payment year, or in the 12 months before the EP's attestation; by

* * * * *

(d) * * *

(1) * * *

(i)(A) The total Medicaid patients assigned to the EP's panel in any representative, continuous 90-day period in either the calendar year preceding the EP's payment year, or the 12 months before the EP's attestation when at least one Medicaid encounter took place with the individual in the 24 months before the beginning of the 90-day period; plus

* * * * *

(ii)(A) The total patients assigned to the provider in that same 90-day period with at least one encounter taking place with the patient during the 24 months before the beginning of the 90-day period; plus

* * * * *

(2) * * *

(i)(A) The total Needy Individual patients assigned to the EP's panel in any representative, continuous 90-day period in the either the calendar year preceding the EP's payment year, or the 12 months before the EP's attestation when at least one Needy Individual encounter took place with the individual in the 24 months before the beginning of the same 90-day period; plus

* * * * *

(ii)(A) The total patients assigned to the provider in that same 90-day period with at least one encounter taking place with the patient during the 24 months before the beginning of the 90-day period, plus

* * * * *

(e) * * *

(1) A Medicaid encounter means services rendered to an individual on any one day where:

* * * * *

(iii) The individual was enrolled in a Medicaid program (or a Medicaid demonstration project approved under section 1115 of the Act) at the time the billable service was provided.

(2) * * *

(i) A Medicaid encounter means services rendered to an individual per inpatient discharge when any of the following occur:

(C) The individual was enrolled in a Medicaid program (or a Medicaid demonstration project approved under section 1115 of the Act) at the time the billable service was provided.

(ii) A Medicaid encounter means services rendered in an emergency department on any 1 day if any of the following occur:

* * * * *

(C) The individual was enrolled in a Medicaid program (or a Medicaid demonstration project approved under section 1115 of the Act) at the time the billable service was provided.

(3) For purposes of calculating needy individual patient volume, a needy patient encounter means services rendered to an individual on any 1 day if any of the following occur:

* * * * *

(iii) The individual was enrolled in a Medicaid program (or a Medicaid demonstration project approved under section 1115 of the Act) at the time the billable service was provided.

* * * * *

■ 22. Section 495.310 is amended as follows:
■ A. Removing and reserving paragraphs (a)(1)(ii) and (a)(2)(ii).
■ B. Adding paragraph (f)(8).
■ C. Revising paragraph (g)(1)(i)(B) introductory text.
■ D. In paragraphs (g)(1)(i)(B)(*1*) through (g)(1)(i)(B)(*3*), by removing the term ''discharge'' wherever it appears and adding the term ''acute-care inpatient discharge'' in its place.
■ E. In paragraph (g)(1)(i)(C), by removing the term ''discharges'' and adding the term ''acute-care inpatient discharges'' in its place.
■ F. In paragraphs (g)(2)(i)(A) and (B), (g)(2)(ii)(A), and (g)(2)(iii), by removing the phrase ''inpatient-bed-days'' wherever it appears and adding the phrase ''acute care inpatient-bed-days'' in its place.

The addition and revision read as follows:

§ 495.310 Medicaid provider incentive payments.

* * * * *

(f) * * *

(8) The aggregate EHR hospital incentive amount calculated under paragraph (g) of this section is determined by the State from which the eligible hospital receives its first payment year incentive. If a hospital receives incentive payments from other States in subsequent years, total incentive payments received over all payment years of the program can be no greater than the aggregate EHR incentive amount calculated by the initial State.

(g) * * *

(1) * * *

(i) * * *

(B) The discharge-related amount for the most recent continuous 12-month period selected by the State, but ending before the federal fiscal year that serves

as the first payment year. The discharge-related amount is the sum of the following, with acute-care inpatient discharges over the 12-month period and based upon the total acute-care inpatient discharges for the eligible hospital (regardless of any source of payment):

* * * * *

■ 23. Section 495.312 is amended by revising paragraph (c) to read as follows:

§ 495.312 Process for payments.

* * * * *

(c) *State's role.* (1) Except as specified in paragraph (c)(2) of this section, the State determines the provider's eligibility for the EHR incentive payment under subparts A and D of this part and approves, processes, and makes timely payments using a process approved by CMS.

(2) At the State's option, CMS conducts the audits and handles any subsequent appeals, of whether eligible hospitals are meaningful EHR users on the States' behalf.

* * * * *

■ 24. Section 495.316 is amended by revising paragraph (d)(2) to read as follows:

§ 495.316 State monitoring and reporting regarding activities required to receive an incentive payment.

* * * * *

(d) * * *

(2)(i) Subject to § 495.332, the State may propose a revised definition for Stage 1 of meaningful use of certified EHR technology, subject to CMS prior approval, but only with respect to the following objectives:

(A) Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research or outreach.

(B) Capability to submit electronic data to immunization registries or immunization information systems and actual submission except where prohibited, and according to applicable law and practice.

(C) Capability to submit electronic data on reportable (as required by State or local law) lab results to public health agencies and actual submission except where prohibited according to applicable law and practice.

(D) Capability to submit electronic syndromic surveillance data to public health agencies and actual submission except where prohibited and according to applicable law and practice.

(ii) Subject to § 495.332, the State may propose a revised definition for Stage 2 of meaningful use of certified EHR technology, subject to CMS prior approval, but only with respect to the following objectives:

(A) Generate lists of patients by specific conditions to use for quality improvement, reduction of disparities, research, or outreach.

(B) Capability to submit electronic data to immunization registries or immunization information systems, except where prohibited, and in accordance with applicable law and practice.

(C) Capability to submit electronic reportable laboratory results to public health agencies, except where prohibited, and in accordance with applicable law and practice.

(D) Capability to provide electronic syndromic surveillance data to public health agencies, except where prohibited, and in accordance with applicable law and practice.

(E) Capability to identify and report cancer cases to a public health central cancer registry, except where prohibited, and in accordance with applicable law and practice.

(F) Capability to identify and report specific cases to a specialized registry (other than a cancer registry), except where prohibited, and in accordance with applicable law and practice.

* * * * *

■ 23. Section 495.332 is amended by:

■ A. Adding paragraph (b)(6).

■ B. Revising paragraph (c) introductory text.

■ C. Removing paragraph (d)(9).

■ D. Adding paragraph (g).

The additions and revisions read as follows:

§ 495.332 State Medicaid health information technology (HIT) plan requirements.

* * * * *

(b) * * *

(6) For ensuring that at least one clinical location used for the calculation of the EP's patient volume has Certified EHR Technology during the payment year for which the EP is attesting.

(c) *Monitoring and validation.* Subject to paragraph (g) of this section, for monitoring and validation of information States must include the following:

* * * * *

(g) *Optional—signed agreement.* At the State's option, the State may include a signed agreement indicating that the State does all of the following:

(1) Designates CMS to conduct all audits and appeals of eligible hospitals' meaningful use attestations.

(2) Is bound by the audit and appeal findings described in paragraph (g)(1) of this section.

(3) Performs any necessary recoupments if audits (and any subsequent appeals) described in paragraph (g)(1) of this section determine that an eligible hospital was not a meaningful EHR user.

(4) Is liable for any FFP granted to the State to pay eligible hospitals that, upon audit (and any subsequent appeal) are determined not to have been meaningful EHR users.

■ 26. Section 495.342 is amended by revising the introductory text to read as follows:

§ 495.342 Annual HIT IAPD requirements.

Each State is required to submit the HIT IAPD Updates 12 months from the date of the last CMS approved HIT IAPD and must contain the following:

* * * * *

■ 27. Section 495.370 is amended by adding paragraph (d) to read as follows:

§ 495.370 Appeals process for a Medicaid provider receiving electronic health record incentive payments.

* * * * *

(d) This section does not apply in the case that CMS conducts the audits and handles any subsequent appeals under § 495.312(c)(2) of this part.

(Catalog of Federal Domestic Assistance Program No. 93.778, Medical Assistance Program)

(Catalog of Federal Domestic Assistance Program No. 93.773, Medicare—Hospital Insurance; and Program No. 93.774, Medicare—Supplementary Medical Insurance Program)

Dated: August 21, 2012.

Marilyn Tavenner,

Acting Administrator, Centers for Medicare & Medicaid Services.

Approved: August 21, 2012.

Kathleen Sebelius,

Secretary, Department of Health and Human Services.

[FR Doc. 2012–21050 Filed 8–23–12; 2:30 pm]

BILLING CODE 4120–01–P

Exhibit W (Relevant Responses to County Requirements)

to the

Electronic Health Records System and Services Agreement

EXHIBIT W

RELEVANT RESPONSES TO COUNTY REQUIREMENTS

The following Exhibits are attached to this Exhibit W (Relevant Responses to County Requirements) and are hereby incorporated by reference:

W.1	Transmittal Letter
W.2	Detailed RFP Requirements Response Form
W.3	Organization Documents
W.4	Third-Party Certifications
W.5	Minimum Mandatory Requirements Proposal

Exhibit W.1 (Transmittal Letter)

to the

Electronic Health Records System and Services Agreement

ELECTRONIC HEALTH RECORDS SYSTEM (EHR SYSTEM)

REQUEST FOR PROPOSALS

APPENDIX A (TRANSMITTAL LETTER)

November 15, 2011

Transmittal Letter

March 1, 2012

Re: Request for Proposals for the Electronic Health Records System (EHR System) RFP #KL2011.

The undersigned Proposer hereby represents and agrees as follows:

1. Proposer has read and understands the Request for Proposals for the Electronic Health Records System (EHR System) RFP #KL2011 ("**RFP**") dated November 15, 2011, in response to which this Proposal is being submitted.

2. Proposer has an affirmative duty to inquire about and seek clarification of any question or other item in the RFP that Proposer does not fully understand or that Proposer reasonably believes is susceptible to more than one interpretation.

3. Proposer's Proposal (including all subparts, including the Minimum Mandatory Requirements Proposal, Detailed RFP Requirements Proposal, and Price Proposal) complies with the instructions and conditions of the RFP.

4. Proposer's Proposal as modified (including any Appendices, Exhibits, and Addenda) shall be incorporated into the Agreement resulting from this RFP.

5. Proposer shall be bound by the representations, terms, and conditions contained in its Proposal. Proposer acknowledges and accepts all terms and conditions of the RFP, the Required Agreement, and all Appendices, Exhibits, and Addendums attached thereto, except as specified in its Proposal.

6. Proposer's proposed pricing was determined independently of other Proposers submitting Proposals in response to this RFP. Proposer acknowledges and agrees that the Agreement shall be a fixed fee agreement, and that it is able to complete the Services according to the project schedule specified in its Proposal at the price proposed.

7. Proposer's Proposal constitutes a firm offer to County which cannot be withdrawn for twelve (12) months from Proposal submission or the conclusion of good faith negotiations on the Required Agreement, whichever is later.

8. Proposer will bear sole and complete responsibility for all work as defined in the RFP.

Check the following box that applies:

☒ Proposer will perform the resultant Agreement as a single contractor by itself

☐ Proposer will perform the resultant Agreement as a single contractor with the use of the following subcontractor(s):

Subcontractor Name	Nature of Subcontractor Role

Proposer acknowledges that the RFP shall not be deemed an offer by County and recognizes that County reserves the right to accept or reject, at its sole discretion, any and all Proposals furnished in response to this RFP.

The undersigned below represents and warrants that he/she is authorized to make representations for Proposer, and authorized to sign for and on behalf of Proposer and to bind Proposer to an agreement. Proposals signed by other than the owner of a sole proprietorship, an authorized officer of a corporation, an authorized general partner of a general or limited partnership, or a manager or managing member of a limited liability company must include a power of attorney authorizing the signature.

Proposer's Company Name: Cerner
Signed by: Marc Naughton
Print Name: Marc Naughton
Title: EVP &Chief Financial Officer
Date: March 1, 2012
Address: 2800 Rockcreek Parkway
North Kansas City, Missouri 64117
E-mail: mnaughton@cerner.com
Telephone: 816-201-1989
Fax: 816-571-1989

Exhibit W.2 (Detailed RFP Requirements Response Form)

to the

Electronic Health Records System and Services Agreement

ELECTRONIC HEALTH RECORDS SYSTEM (EHR SYSTEM)

REQUEST FOR PROPOSALS

APPENDIX U

(DETAILED RFP REQUIREMENTS PROPOSAL RESPONSE FORM)

November 15, 2011

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Proposer must provide responses to the Detailed RFP Requirements seen in Section 6 (Detailed RFP Requirements Proposal) of the RFP by submitting a signed, completed version of this Appendix U (Detailed RFP Requirements Proposal Response Form) as well as providing several required documents and forms (e.g., Transmittal Letter, Proposer's Organization Questionnaire/Affidavit) that are included as Appendices to this RFP.

As noted in Section 6 (Detailed RFP Requirements Proposal) of the RFP, Proposer's response for each requirement must be limited to the space provided in this Appendix U (Detailed RFP Requirements Proposal Response Form) and must be entered using Calibri font style, 11 point font size.

Proposer's response must be limited to the space provided below for each requirement.

1. EXECUTIVE SUMMARY

Provide Proposer's Executive Summary, pursuant to Section 6.5 (Executive Summary) of the RFP. Proposer's response for this Section is limited to 3 pages.

*Provide a summary of the Proposer's understanding of the requested EHR System;

LAC DHS is seeking to make real improvements in population health, the patient's experience of care, and the cost of care through this procurement of an integrated EHR across your ambulatory and in patient healthcare delivery network.

*Discuss the Proposer's specific role and relevant qualifications for performing that role;

Cerner offers clients a dedicated exclusive focus on healthcare, an end-to-end solution and service portfolio, including comprehensive software solutions, full implementation services provided by Cerner's own team of professionals, Application Management Services (AMS) support services, and best in KLAS Remote Hosting Services (RHO).

*Provide a brief description of the Proposer's history, number of years the organization has been in business, and type of products and services it provides;

Since 1979, Cerner has focused exclusively on designing and deploying healthcare IT solutions that improve efficiency and quality of care. Our revolutionary person-centric Cerner Millennium architecture is designed to fundamentally transform healthcare delivery. Cerner solutions combine technology with knowledge to deliver vital data for effective, real-time decision-making across the enterprise. Healthcare has been our only focus from our inception—and our proven vision and results are a testament to our commitment to eliminate error, variance, waste, delay and friction for more efficient business management which optimizes clinical and financial outcomes. Around the world, health organizations ranging from single-doctor practices to entire countries turn to Cerner for our powerful yet intuitive solutions.

*Summarize the key qualifications of Proposer, distinguishing characteristics of the Proposal, the proposed solution, and Project approach, as well as the principal advantages to County;

•Comprehensive Software Solution: Cerner offers an unrivaled breadth and depth of solutions, spanning diverse healthcare venues such as ambulatory clinics and acute care hospitals. The majority of these solutions have been organically grown to ensure tight integration on a single, unified database. Our commitment in client partnerships is to develop industry standard protocols

and evidenced based content which contribute towards continued advancement to clinical excellence.

•Quality: Clients like LA County find assurance in the fact that Cerner is investing over $1 billion in the next five years in Research & Development, an investment that directly correlates to the improvements and new developments in the solutions we offer. As an organization we are continually innovating to find ways to improve clinical, operational and financial outcomes for our clients - enhancing and promoting their ability to provide excellent care. Largely this focus is based on reducing non-value labor to improve patient centric care and quality outcomes. We realize our clients are in the Healthcare business not the IT or reporting business. Only Cerner has developed a platform that allows for fully digitized hospitals; beds, monitors, pumps and patient access modules, all connected to the EMR on a Cerner developed device connectivity platform reducing nurse data entry by up to 90%. Cerner is also unique in its focus on meeting our clients' needs around quality measures submission requirements. Without third party solutions, Cerner offers real time dashboards to track Core Measures required for Meaningful Use and beyond as a bi-product of care versus retrospective reporting requiring manual abstraction and analysis. Additionally, all current clients receive a Sepsis intervention algorithm imbedded within our software to help prevent incidence of Sepsis within their patient populations by proactively identifying the early signs of Sepsis giving our clients the capability to proactively manage patient outcomes and quality. Dr. John Hensing, CIO of Banner Health, best summarizes the benefit Cerner brings: "The system tackled the deadly problem of sepsis two years ago by starting to flag at-risk patients through its electronic health-record system. An early alert system was created to identify patients most likely to develop the serious bloodstream infection. As a result, Banner Health has seen a substantial improvement. Out of all identified patients at risk of sepsis, 92% leave the hospital alive. "It's a combination of having clinicians respond promptly, creating a protocol of early intervention and using EHR technology to reduce overall mortality and improve outcomes."

In January of 2012, Thomson Reuters released its list of the Top 15 Health Systems in the United States. The top systems were determined by strict performance, outcomes and safety criteria. Six of the nation's top 15 health systems are Cerner clients, more than any other EHR supplier. But this honor rightfully belongs to our clients, and we will continue to innovate and deliver solutions as a clinical partner capable of helping our clients accomplish their goals.

Cerner has a high interest in partnering with organizations such as Los Angeles County DHS, and count as our partners similar county healthcare facilities in southern California, such as the Los Angeles County Sheriff and Probation Departments, the County of Orange Health Care Agency, Ventura County, Tri-City Medical Center and Palomar Pomerado Health System. Additionally, we have key partnerships and provide solutions to numerous other county agencies across the country, and the Department of Defense and the Veterans Association.

•Seamless Integration between Your Clinics and In-Patient Hospitals: LAC DHS requires a clinical information system that will span the needs of your diverse enterprise. The architecture must connect patients with care teams and care teams with one another, allowing seamless information sharing throughout the organization, whether in inpatient or ambulatory venues. Only Cerner offers a comprehensive, person-centric approach to align all aspects of the physician community and a proven "Medical Home" approach emphasizing continuity of care, collective responsibility, communication, disease management in the office and access to information, quality and safety. Because of our unwavering focus on this industry, we know the culture, the language, the nuances of healthcare, and we know how to make all the components work together. In fact, virtually all our installations include non-Cerner software should LAC DHS decide to maintain areas of current

investment.

•Information Exchange With Other Healthcare Providers in LA Area: The Cerner Network is an industry leading suite of connectivity solutions and services that makes electronic data exchange simple, fast and affordable which:

Allows providers to electronically share clinical information with one another

Makes it easier to stay in touch with your patients

Helps providers qualify for federal incentives

Supports health information exchange and improves patient care at a health system, community, state or federal level

Through Cerner's unique ability to connect both Cerner systems and foreign EMR's and well as our numerous established EMR's in the LA County area, such as CHLA, USC, Orange County, Ventura County, and Adventist, we believe that Cerner is best positioned to assist LA County in implementing the same award winning, data driven Health Information Exchange Network to meet its future needs.

•Proven Speed to Value and Efficiency: We understand that a smarter approach to implementation is required in order for a healthcare organization to remain fiscally sound in today's environment. With this reality in mind, we have created the Cerner Solutions Center, a comprehensive, best practices approach to implementing systems from start to finish. Our standardized event-based implementation approach draws upon more than 30 years of proven content from real clients to reduce project variance, increase efficiency and optimize resource use for greater implementation discipline and predictability, The Solution Center approach will allow you to realize benefits at an accelerated pace while minimizing the resources required to perform one-time build activities. With this methodology, Cerner, certified as a Complete EMR by the Certification Commission for Health Information Technology (CCHIT®), is committed to enabling your achievement of "meaningful use" standards in an optimal timeframe, allowing your organization to benefit from the American Recovery and Reinvestment Act's (ARRA) designation of Medicare and Medicaid payments.

•Cerner's Remote Hosting Managed Service Offering (RHO): represents a Best in KLAS offering 3 consecutive years running, 2009 – 2011. Through remote hosting Cerner clients are able to address the growing challenges a healthcare organization is faced in the IT realm, including: hiring and retaining skilled IT professionals, flat-lining capital expenditures relating to IT, managing and maintaining a complex computing environment continually requiring change, maintaining system stability and reliability for clinicians and physicians, and finally disaster prevention & recovery. Cerner remote hosting includes hardware and sublicensed software, proactive 24x7 system management, N+1 hardened datacenter usage, telecommunication between Cerner datacenter and client data center, and guaranteed system availability and response times. Primary benefits realized by Cerner remote hosted clients include: risk and price protection, reduction of FTE requirements associated with managing Cerner technology infrastructure, faster return on investment, and cash and capital retention. The preceding information has all been recognized by KLAS with additional positive notations being: highest satisfaction scores, highest scores for system uptime and performance, and the highest renewal rate for any vendor. Key to note is KLAS' acknowledgement that Cerner is the only vendor in which hosting services increased overall satisfaction with software.

•Account Management Services (AMS) provides production support of Millennium Solutions, resulting in improved solution operation and adoption, lower costs, and less disruption of end users enabling your team to focus on their organization's mission and vision. With AMS, an Engagement

Leader (EL) is assigned to proactively ensure service delivery. The EL is responsible for SLA metrics, client satisfaction, assigning resources, and the overall relationship between your hospital and our team. There are support requirements in the hosting exhibits that seem to indicate that DHS is asking for an AMS support model. Because this was not specifically identified however, Cerner has included it as an Optional service and provided pricing in the Optional Pricing Worksheets.

*Address any issue(s) that Proposer envisions to be associated with fulfilling the requirements of the

RFP and cite specific suggestions for avoiding or mitigating these issues.

Cerner does not see risk in ultimately fulfilling all requirements of the RFP. The risk that Cerner would want to note is in the aggressive timeline that is needed to conclude contract negotiations and implement the EHR System at all facilities in order for the County to make the Meaningful Use Attestation dates. Cerner has a proven history of implementing complex systems for large organizations such as LAC DHS both on time and on budget. The risks involved with large system implementations for multi-facility organizations surround keeping the project on schedule and to the originally defined scope. The project resources from all facilities should agree on the overall EHR System design and workflow. There must be good communication and strong team cohesiveness around the vision and mission. It is critical that there be executive leadership involvement in the project for any key decisions that result from differing opinions among representatives from different facilities. The project should be staffed following Cerner's recommendations and it is imperative that clinicians that will participate in the project are back filled in their roles. These same clinicians that will be the project subject matter experts and super users must be involved in training the rest of the end users and actively support the conversion events as project resources. The clinician involvement in the design decisions will lead to a higher rate of end user acceptance and insure the successful adoption of the EHR System.

2. SYSTEM REQUIREMENTS

Provide Proposer's responses to County's system requirements detailed in Appendix H (Functional Requirements), Appendix H-1 (Functional Requirements Attachment), Appendix I (Technical Requirements), Appendix I-1 (Technical Requirements Attachment), Appendix J (Implementation Requirements) and Appendix K (Administrative Requirements), below.

2.1 APPENDIX H (FUNCTIONAL REQUIREMENTS)

2.1.1 CCHIT CRITERIA

Proposer must affirmatively confirm whether or not Proposer's Licensed Software complies with each CCHIT Ambulatory or Inpatient Criteria by noting "Yes" or "No" for each criteria identified below, pursuant to Section 1.1 (CCHIT Criteria) of Appendix H (Functional Requirements). Proposer must also provide any third party certification it has received regarding its proposed EHR System as Attachment H (Third Party Certification).

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 01.01	The system shall create a single patient record for each patient.	☒ Yes ☐ No
Ambulatory	AM 01.02	The system shall associate (store and link) key identifier information (e.g., system ID, medical record number) with each patient record.	☒ Yes ☐ No
Ambulatory	AM 01.03	The system shall provide the ability to store more than one identifier for each patient record.	☒ Yes ☐ No
Ambulatory	AM 01.04	The system shall provide a field which will identify patients as being exempt from reporting functions.	☒ Yes ☐ No
Ambulatory	AM 01.05	The system shall provide the ability to merge patient information from two patient records into a single patient record.	☒ Yes ☐ No
Ambulatory	AM 02.01	The system shall provide the ability to include demographic information in reports.	☒ Yes ☐ No
Ambulatory	AM 02.02	The system shall provide the ability to maintain and make available historic information for demographic data including prior names, addresses, phone numbers and email addresses.	☒ Yes ☐ No
Ambulatory	AM 02.04	The system shall provide the ability to modify demographic information about the patient.	☒ Yes ☐ No
Ambulatory	AM 02.05	The system shall store demographic information in the patient medical record in separate discrete data fields, such that data extraction tools can retrieve these data.	☒ Yes ☐ No
Ambulatory	FN 01.01	The system shall provide the ability to access demographic information such as name, date of birth and gender needed for patient care functions.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	FN 01.02	The system shall capture and maintain demographic information as discrete data elements as part of the patient record.	☒ Yes ☐ No
Ambulatory	FN 02.01	The system shall provide the ability to query for a patient by more than one form of identification.	☒ Yes ☐ No
Ambulatory	FN 03.01	The system shall provide the ability to capture and maintain, as discrete data elements, the identity of all providers associated with a specific patient encounter.	☒ Yes ☐ No
Ambulatory	FN 03.02	The system shall provide the ability to capture and maintain, as discrete data elements, the principal provider responsible for the care of an individual patient.	☒ Yes ☐ No
Ambulatory	FN 04.02	The system shall provide the ability to capture, maintain and display, as discrete data elements, all problems/diagnoses associated with a patient.	☒ Yes ☐ No
Ambulatory	AM 03.03	The system shall provide the ability to maintain the onset date of the problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.04	The system shall provide the ability to maintain the resolution date of the problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.05	The system shall provide the ability to record the chronicity (chronic, acute/self-limiting, etc.) of a problem/diagnosis.	☒ Yes ☐ No
Ambulatory	AM 03.06	The system shall provide the ability to record the user ID and date of all updates to the problem/diagnosis list.	☒ Yes ☐ No
Ambulatory	AM 03.07	The system shall provide the ability to associate orders, medications, and notes with one or more problems/diagnoses.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 03.08.01	The system shall provide the ability to associate orders and medications with one or more codified problems/diagnoses.	☒ Yes ☐ No
Ambulatory	AM 03.09	The system shall provide the ability to maintain a coded list of problems/diagnoses.	☒ Yes ☐ No
Ambulatory	FN 04.06	The system shall provide the ability to display different views of the problem / diagnosis list based upon the status of the problem.	☒ Yes ☐ No
Ambulatory	FN 04.01	The system shall provide the ability to capture, maintain and display free text comments associated with the problem / diagnosis.	☒ Yes ☐ No
Ambulatory	AM 04.02	The system shall provide the ability to record the prescribing of medications including the identity of the prescriber.	☒ Yes ☐ No
Ambulatory	AM 04.03	The system shall provide the ability to maintain medication ordering dates.	☒ Yes ☐ No
Ambulatory	AM 04.04	The system shall provide the ability to maintain other dates associated with medications including start, modify, renewal and end dates as applicable.	☒ Yes ☐ No
Ambulatory	AM 04.05	The system shall provide the ability to display medication history for the patient.	☒ Yes ☐ No
Ambulatory	AM 04.06	The system shall provide the ability to capture medications entered by authorized users other than the prescriber.	☒ Yes ☐ No
Ambulatory	AM 04.07	The system shall store medication information in discrete data fields. At a minimum, there must be one field for each of the following: - medication name, form and strength; - dispense quantity; - refills; and - sig.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 04.09	The system shall provide the ability to enter uncoded or free text medications when medications are not on the vendor-provided medication database or information is insufficient to completely identify the medication.	☒ Yes ☐ No
Ambulatory	AM 04.10	The system shall provide the ability to enter or further specify in a discrete field that the patient takes no medications.	☒ Yes ☐ No
Ambulatory	AM 04.11	The system shall provide the ability to record the date of changes made to a patient's medication list and the identity of the user who made the changes.	☒ Yes ☐ No
Ambulatory	FN 06.01	The system shall provide the ability to update and display a patient-specific medication list based on current medication orders or prescriptions.	☒ Yes ☐ No
Ambulatory	FN 06.02	The system shall provide the ability to display a view that includes only current medications.	☒ Yes ☐ No
Ambulatory	FN 06.03	The system shall provide the ability to exclude a medication from the current medication list (e.g. marked inactive, erroneous, completed, discontinued) and document reason for such action.	☒ Yes ☐ No
Ambulatory	FN 06.04	The system shall provide the ability to print a current medication list.	☒ Yes ☐ No
Ambulatory	FN 06.05	The system shall provide the ability to display that the patient takes no medications.	☒ Yes ☐ No
Ambulatory	FN 06.06	The system shall provide the ability to capture and maintain, as discrete data elements, all current medications including over-the-counter and complementary medications such as vitamins, herbs and supplements.	☒ Yes ☐ No
Ambulatory	FN 05.01	The system shall provide the ability to modify or	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		inactivate an item on the allergy and adverse reaction list.	☐ No
Ambulatory	AM 05.03	The system shall provide the ability to display information which has been inactivated or removed from the allergy and adverse reaction list.	☒ Yes ☐ No
Ambulatory	AM 05.04	The system shall provide the ability to specify the type of allergic or adverse reaction in a discrete data field.	☒ Yes ☐ No
Ambulatory	AM 05.05	The system shall provide the ability to capture and maintain, as discrete data, the identity of the user who added, modified, inactivated or removed items from the allergy and adverse reaction list, including attributes of the changed items. The user ID and date/time stamp shall be recorded.	☒ Yes ☐ No
Ambulatory	AM 05.07	The system shall provide the ability for a user to explicitly capture and maintain, as discrete data, that the allergy list was reviewed. The user ID and date/time stamp shall be recorded when the allergies reviewed option is selected.	☒ Yes ☐ No
Ambulatory	AM 05.09	The system shall provide the ability to explicitly indicate in a discrete field that a patient has no known drug allergies or adverse reactions.	☒ Yes ☐ No
Ambulatory	AM 05.12	The system shall provide the ability to display the allergy list, including date of entry.	☒ Yes ☐ No
Ambulatory	AM 05.13	The system shall provide the ability to capture, maintain and display, as discrete data, lists of medications and other agents to which the patient has had an allergic or other adverse reaction.	☒ Yes ☐ No
Ambulatory	AM 06.01	The system shall provide the ability to capture, store, display, and manage patient history.	☒ Yes ☐ No
Ambulatory	AM 06.02	The system shall provide the ability to capture structured data in the patient history.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 06.03	The system shall provide the ability to update a patient history by modifying, adding or removing items from the patient history as appropriate.	☒ Yes ☐ No
Ambulatory	AM 06.04	The system shall provide the ability to capture patient history as both a presence and absence of conditions, i.e., the specification of the absence of a personal or family history of a specific diagnosis, procedure or health risk behavior.	☒ Yes ☐ No
Ambulatory	AM 06.05	The system shall provide the ability to capture history collected from outside sources.	☒ Yes ☐ No
Ambulatory	AM 06.06	The system shall provide the ability to capture patient history in a standard coded form.	☒ Yes ☐ No
Ambulatory	AM 07.01	The system shall provide the ability to create and display a summary list for each patient that includes, at a minimum, the active problem/diagnosis list, current medication list, medication allergies and adverse reactions	☒ Yes ☐ No
Ambulatory	AM 08.01	The system shall provide the ability to create clinical documentation or notes (henceforth "documentation").	☒ Yes ☐ No
Ambulatory	AM 08.02	The system shall provide the ability to display documentation.	☒ Yes ☐ No
Ambulatory	AM 08.03	The system shall provide the ability to save a note in progress prior to finalizing the note.	☒ Yes ☐ No
Ambulatory	AM 08.04	The system shall provide the ability to finalize a note, i.e., change the status of the note from in progress to complete so that any subsequent changes are recorded as such.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 08.05	The system shall provide the ability to record the identity of the user finalizing each note and the date and time of finalization.	☒ Yes ☐ No
Ambulatory	AM 08.06	The system shall provide the ability to cosign a note and record the date and time of signature.	☒ Yes ☐ No
Ambulatory	AM 08.07	The system shall provide the ability to addend and/or correct notes that have been finalized.	☒ Yes ☐ No
Ambulatory	AM 08.08	The system shall provide the ability to identify the full content of a modified note, both the original content and the content resulting after any changes, corrections, clarifications, addenda, etc. to a finalized note.	☒ Yes ☐ No
Ambulatory	AM 08.09	The system shall provide the ability to record and display the identity of the user who addended or corrected a note and the date and time of the change.	☒ Yes ☐ No
Ambulatory	AM 08.10	The system shall provide the ability to enter free text notes.	☒ Yes ☐ No
Ambulatory	AM 08.11	The system shall provide the ability to filter, search or order notes by the provider who finalized the note.	☒ Yes ☐ No
Ambulatory	AM 08.12	The system shall provide the ability to filter, search or order notes by associated diagnosis within a patient record.	☒ Yes ☐ No
Ambulatory	AM 08.13	The system shall provide the ability to capture patient vital signs, including blood pressure, heart rate, respiratory rate, height, and weight, as discrete data.	☒ Yes ☐ No
Ambulatory	AM 08.14	The system shall provide the ability to capture and display temperature, weight and height in both metric and English units	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 08.15	The system shall be capable of indicating to the user when a vital sign measurement falls outside a preset normal range as set by authorized users.	☒ Yes ☐ No
Ambulatory	AM 08.16	The system shall provide the ability to capture other clinical data elements as discrete data.	☒ Yes ☐ No
Ambulatory	AM 08.19	The system shall provide templates for inputting data in a structured format as part of clinical documentation.	☒ Yes ☐ No
Ambulatory	AM 08.20	The system shall provide the ability to customize clinical templates.	☒ Yes ☐ No
Ambulatory	AM 08.21	The system shall be capable of recording comments by the patient or the patient's representative regarding the accuracy or veracity of information in the patient record (henceforth 'patient annotations').	☒ Yes ☐ No
Ambulatory	AM 08.22	The system shall display patient annotations in a manner which distinguishes them from other content in the system.	☒ Yes ☐ No
Ambulatory	AM 08.24	The system shall provide the ability to graph height and weight over time.	☒ Yes ☐ No
Ambulatory	AM 08.25	The system shall provide the ability to calculate and display body mass index (BMI).	☒ Yes ☐ No
Ambulatory	AM 09.01	The system shall provide the ability to capture and store external documents.	☒ Yes ☐ No
Ambulatory	AM 09.03	The system shall provide the ability to save scanned documents as images.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 09.04	The system shall provide the ability to receive, store in the patient's record, and display text-based outside reports.	☒ Yes ☐ No
Ambulatory	AM 09.05.01	The system shall provide the ability to index scanned documents and associate a date and document type to the document.	☒ Yes ☐ No
Ambulatory	AM 09.05.02	The system shall provide the ability to retrieve indexed scanned documents based on document type and date.	☒ Yes ☐ No
Ambulatory	AM 09.06	The system shall provide access to clinical images. They must be accessible from within the patient's chart and labeled and date-time stamped or included in a patient encounter document. These images may be stored within the system or be provided through direct linkage to external sources.	☒ Yes ☐ No
Ambulatory	AM 09.07	The system shall provide the ability to accept, store in the patient's record, and display clinical results received through an interface with an external source.	☒ Yes ☐ No
Ambulatory	FN 14.01	The system shall provide the ability to produce patient instructions and patient educational materials which may reside within the system or be provided through links to external source.	☒ Yes ☐ No
Ambulatory	AM 10.03	The system shall have the ability to provide access to patient-specific test and procedure instructions that can be modified by the physician or health organization; these instructions are to be given to the patient. These instructions may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 10.04	The system shall have the ability to provide access to patient-specific test and procedure instructions that can be modified by the physician or health organization; these instructions are to be given to the filler of the order. These instructions may reside within the system or be provided through links to external sources.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 10.05	The system shall provide the ability to record that patient specific instructions or educational material were provided to the patient.	☒ Yes ☐ No
Ambulatory	AM 10.06	The system shall provide the ability to create patient specific instructions.	☒ Yes ☐ No
Ambulatory	FN 17.01	The system shall provide the ability to access and review medication information (such as patient education material or drug monograph). This may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 11.01	The system shall provide the ability to create prescription or other medication orders with sufficient information for correct filling and dispensing by a pharmacy.	☒ Yes ☐ No
Ambulatory	AM 11.02	The system shall provide the ability to record user and date stamp for prescription related events, such as initial creation, renewal, refills, discontinuation, and cancellation of a prescription.	☒ Yes ☐ No
Ambulatory	AM 11.03	The system shall provide the ability to capture the identity of the prescribing provider for all medication orders.	☒ Yes ☐ No
Ambulatory	AM 11.04	The system shall provide the ability to capture common content for prescription details including strength, sig, quantity, and refills to be selected by the ordering clinician.	☒ Yes ☐ No
Ambulatory	AM 11.05	The system shall provide the ability to receive and display information received through electronic prescription eligibility checking.	☒ Yes ☐ No
Ambulatory	AM 11.07	The system shall provide the ability to reorder a prior prescription without re-entering previous data (e.g. administration schedule, quantity).	☒ Yes ☐ No
Ambulatory	AM 11.08	The system shall provide the ability to print and electronically fax prescriptions.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 11.09	The system shall provide the ability to re-print and re-fax prescriptions.	☒ Yes ☐ No
Ambulatory	AM 11.11	The system shall provide the ability to display a dose calculator for patient-specific dosing based on weight.	☒ Yes ☐ No
Ambulatory	AM 11.12	The system shall provide the ability to identify medication samples dispensed, including lot number and expiration date.	☒ Yes ☐ No
Ambulatory	AM 11.13	The system shall provide the ability to prescribe fractional amounts of medication (e.g. 1/2 tsp, 1/2 tablet).	☒ Yes ☐ No
Ambulatory	AM 11.14	The system shall provide the ability to alert the user if the drug interaction information is outdated.	☒ Yes ☐ No
Ambulatory	AM 11.15	The system shall provide the ability to allow the user to configure prescriptions to incorporate fixed text according to the user's specifications.	☒ Yes ☐ No
Ambulatory	FN 09.04	The system shall provide the ability to capture and maintain, as discrete data, a diagnosis/problem code or description associated with an order of any type (including prescriptions and medications ordered for administration).	☒ Yes ☐ No
Ambulatory	AM 11.17	The system shall provide the ability to display the associated problem or diagnosis (indication) on the printed prescription.	☒ Yes ☐ No
Ambulatory	AM 11.19	The system shall provide the ability to create provider specific medication lists of the most commonly prescribed drugs with a default route, dose, frequency, and quantity.	☒ Yes ☐ No
Ambulatory	AM 11.20	The system shall provide the ability to add reminders for necessary follow up tests based on	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		medication prescribed.	☐ No
Ambulatory	FN 07.01	The system shall provide the ability to alert the user at the time a new medication is prescribed/ordered that drug interaction, allergy, and formulary checking will not be performed against the uncoded medication or free text medication.	☒ Yes ☐ No
Ambulatory	FN 07.02	The system shall provide the ability to prescribe/order uncoded and non-formulary medications.	☒ Yes ☐ No
Ambulatory	FN 07.03	The system shall provide the ability to maintain a coded list of medications including a unique identifier for each medication.	☒ Yes ☐ No
Ambulatory	FN 07.04	The system shall provide end-users the ability to search for medications by generic or brand name.	☒ Yes ☐ No
Ambulatory	FN 07.05	The system shall provide the ability to access reference information for prescribing/ordering.	☒ Yes ☐ No
Ambulatory	AM 12.01	The system shall provide the ability to order diagnostic tests, including labs and imaging studies.	☒ Yes ☐ No
Ambulatory	AM 12.02	The system shall provide the ability to capture the identity of the ordering provider for all test orders.	☒ Yes ☐ No
Ambulatory	AM 12.03	The system shall provide the ability to capture appropriate order entry detail, including associated diagnosis.	☒ Yes ☐ No
Ambulatory	AM 12.04	The system shall provide the ability to display user created instructions and/or prompts when ordering diagnostic tests or procedures.	☒ Yes ☐ No
Ambulatory	AM 12.05	The system shall provide the ability to relay orders for a diagnostic test to the correct destination for	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		completion.	☐ No
Ambulatory	AM 12.06	The system shall have the ability to provide a view of active orders for an individual patient.	☒ Yes ☐ No
Ambulatory	AM 12.07	The system shall have the ability to provide a view of orders by like or comparable type, e.g., all radiology or all lab orders.	☒ Yes ☐ No
Ambulatory	AM 12.08	The system shall provide the ability to display outstanding orders for multiple patients (as opposed to outstanding orders for a single patient).	☒ Yes ☐ No
Ambulatory	FN 09.01	The system shall provide the ability to require problem / diagnosis as an order component.	☒ Yes ☐ No
Ambulatory	FN 09.02	The system shall provide the ability to view status information for ordered services.	☒ Yes ☐ No
Ambulatory	FN 10.01	The system shall provide the ability to define a set of items to be ordered as a group.	☒ Yes ☐ No
Ambulatory	FN 10.02	The system shall provide the ability to modify order sets.	☒ Yes ☐ No
Ambulatory	FN 10.03	The system shall provide the ability to include in an order set order types including but not limited to medications, laboratory tests, imaging studies, procedures and referrals.	☒ Yes ☐ No
Ambulatory	FN 11.01	The system shall provide the ability for individual orders in an order set to be selected or deselected by the user.	☒ Yes ☐ No
Ambulatory	FN 11.04	The system shall provide the ability to display orders placed through an order set either individually or as a group.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 14.01	The system shall provide the ability to indicate normal and abnormal results based on data provided from the original data source.	☒ Yes ☐ No
Ambulatory	AM 14.02	The system shall provide the ability to display numerical results in flow sheets and graphical form in order to compare results, and shall provide the ability to display values graphed over time.	☒ Yes ☐ No
Ambulatory	AM 14.03	The system shall provide the ability to display non-numeric current and historical test results as textual data.	☒ Yes ☐ No
Ambulatory	AM 14.04	The system shall provide the ability to notify the relevant providers (ordering, copy to) that new results have been received.	☒ Yes ☐ No
Ambulatory	AM 14.05	The system shall provide the ability to filter or sort results by type of test and test date.	☒ Yes ☐ No
Ambulatory	AM 14.07	The system shall provide the ability to forward a result to other users.	☒ Yes ☐ No
Ambulatory	AM 14.08	The system shall provide the ability to link the results to the original order.	☒ Yes ☐ No
Ambulatory	AM 14.09	The system shall provide the ability for a user to attach a free text comment to a result that can be seen by another user who might subsequently view that result.	☒ Yes ☐ No
Ambulatory	AM 14.10	The system shall provide the ability to associate one or more images with a non-numerical result.	☒ Yes ☐ No
Ambulatory	AM 14.11	The system shall provide the ability for a user to whom a result is presented to acknowledge the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		result.	☐ No
Ambulatory	AM 15.01	The system shall provide the ability to capture scanned paper consent documents (covered in DC.1.1.3.1).	☒ Yes ☐ No
Ambulatory	AM 15.02	The system shall provide the ability to store, display and print patient consent forms.	☒ Yes ☐ No
Ambulatory	AM 15.04	The system shall provide the ability to store and display administrative documents (e.g. privacy notices).	☒ Yes ☐ No
Ambulatory	AM 15.05	The system shall provide the ability to chronologically display consents and authorizations.	☒ Yes ☐ No
Ambulatory	AM 16.01	The system shall provide the ability to indicate that a patient has completed advance directive(s).	☒ Yes ☐ No
Ambulatory	AM 16.02	The system shall provide the ability to indicate the type of advance directives, such as living will, durable power of attorney, or a "Do Not Resuscitate" order.	☒ Yes ☐ No
Ambulatory	AM 16.03	The system shall provide the ability to indicate when advance directives were last reviewed.	☒ Yes ☐ No
Ambulatory	AM 17.01	The system shall have the ability to provide access to standard care plan, protocol and guideline documents when requested at the time of the clinical encounter. These documents may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Ambulatory	AM 17.02	The system shall provide the ability to create site-specific care plan, protocol, and guideline documents.	☒ Yes ☐ No
Ambulatory	AM 17.03	The system shall provide the ability to modify site-	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		specific standard care plan, protocol, and guideline documents obtained from outside sources.	☐ No
Ambulatory	FN 12.10	The system shall provide the ability to check for potential interactions between medications to be prescribed and medication allergies and intolerances listed in the record and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Ambulatory	AM 19.05	The system shall provide the ability to set the severity level at which drug interaction warnings should be displayed.	☒ Yes ☐ No
Ambulatory	FN 12.04	The system shall provide the ability to display, on demand, potential drug-allergy interactions, drug-drug interactions and drug-diagnosis interactions based on current medications, active allergies and active problems.	☒ Yes ☐ No
Ambulatory	FN 13.01	The system shall provide drug-diagnosis interaction alerts at the time of medication prescribing/ordering.	☒ Yes ☐ No
Ambulatory	FN 12.11	The system shall provide the ability, when a new allergy is documented, to check for a potential interaction between the newly-documented allergy and the patient's current medications, and alert the user if such interactions exist.	☒ Yes ☐ No
Ambulatory	FN 12.01	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and current medications and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Ambulatory	FN 12.05	The system shall provide the ability to view the rationale for a drug interaction alert.	☒ Yes ☐ No
Ambulatory	FN 12.06	The system shall provide the ability to capture and maintain at least one reason for overriding any drug-drug or drug-allergy/intolerance interaction warning triggered at the time of medication	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		prescribing/ordering.	
Ambulatory	FN 12.07	The system shall provide the ability to enter a structured response when overriding a drug-drug or drug-allergy/intolerance warning.	☒ Yes ☐ No
Ambulatory	FN 12.08	The system shall provide the ability to prescribe/order a medication despite alerts for interactions and/or allergies/intolerances being present.	☒ Yes ☐ No
Ambulatory	FN 12.09	The system shall provide the ability to accept updates to drug interaction databases	☒ Yes ☐ No
Ambulatory	FN 15.01	The system shall provide the ability to capture medication administration details as discrete data, including: (1) the medication name and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Ambulatory	FN 16.02	The system shall provide the ability to capture, in a discrete field, an allergy/adverse reaction to a specific immunization.	☒ Yes ☐ No
Ambulatory	FN 16.03	The system shall provide the ability to capture immunization administration details as discrete data, including: (1) the immunization type and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Ambulatory	AM 21.01	The system shall provide the ability to create referral orders with detail adequate for correct routing.	☒ Yes ☐ No
Ambulatory	AM 21.02	The system shall provide the ability to record user ID and date/time stamp for all referral related events.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 22.01	The system shall provide the ability to establish criteria for disease management, wellness, and preventive services based on patient demographic data (minimally age and gender).	☒ Yes ☐ No
Ambulatory	AM 22.02	The system shall provide the ability to display alerts based on established guidelines.	☒ Yes ☐ No
Ambulatory	AM 22.03	The system shall provide the ability to establish criteria for disease management, wellness, and preventive services based on clinical data (problem/diagnosis list, current medications).	☒ Yes ☐ No
Ambulatory	AM 22.04	The system shall provide the ability to update disease management guidelines and any associated reference material.	☒ Yes ☐ No
Ambulatory	AM 22.05	The system shall provide the ability to update preventive services/wellness guidelines and any associated reference material.	☒ Yes ☐ No
Ambulatory	AM 22.06	The system shall provide the ability to override guidelines.	☒ Yes ☐ No
Ambulatory	AM 22.07	The system shall provide the ability to document reasons disease management or preventive services/wellness prompts were overridden.	☒ Yes ☐ No
Ambulatory	AM 22.08	The system shall provide the ability to modify the rules or parameters upon which guideline-related alerts are based.	☒ Yes ☐ No
Ambulatory	AM 22.09	The system shall provide the ability to document that a preventive or disease management service has been performed based on activities documented in the record (e.g., vitals signs taken).	☒ Yes ☐ No
Ambulatory	AM 22.10	The system shall provide the ability to document that a disease management or preventive service has been performed with associated dates or other relevant details recorded.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 21.11	The system shall provide the ability to individualize alerts to address a patient's specific clinical situation.	☒ Yes ☐ No
Ambulatory	AM 23.01	The system shall provide the ability to identify preventive services, tests or counseling that are due on an individual patient.	☒ Yes ☐ No
Ambulatory	AM 23.02	The system shall provide the ability to display reminders for disease management, preventive and wellness services in the patient record.	☒ Yes ☐ No
Ambulatory	AM 23.03	The system shall provide the ability to identify criteria for disease management, preventive and wellness services based on patient demographic data (age, gender).	☒ Yes ☐ No
Ambulatory	AM 23.04	The system shall provide the ability to identify criteria for disease management, preventive, and wellness services based on clinical data (problem/diagnosis list, current medications, lab values).	☒ Yes ☐ No
Ambulatory	AM 23.05	The system shall provide the ability to modify the guidelines, criteria or rules that trigger the reminders.	☒ Yes ☐ No
Ambulatory	AM 23.06	The system shall provide the ability to notify the provider that patients are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 23.07	The system shall provide the ability to produce a list of patients who are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 23.09	The system shall provide the ability to automatically generate reminder letters for patients who are due or are overdue for disease management, preventive or wellness services.	☒ Yes ☐ No
Ambulatory	AM 24.01	The system shall provide the ability to create and assign tasks by user or user role.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 24.02	The system shall provide the ability to present a list of tasks by user or user role.	☒ Yes ☐ No
Ambulatory	AM 24.03	The system shall provide the ability to re-assign and route tasks from one user to another user.	☒ Yes ☐ No
Ambulatory	AM 24.04	The system shall provide the ability to designate a task as completed.	☒ Yes ☐ No
Ambulatory	AM 24.05	The system shall provide the ability to remove a task without completing the task.	☒ Yes ☐ No
Ambulatory	AM 25.01	The system shall provide the ability to document verbal/telephone communication into the patient record.	☒ Yes ☐ No
Ambulatory	AM 25.03	The system shall support messaging between users.	☒ Yes ☐ No
Ambulatory	AM 26.01	The system shall have the ability to provide electronic communication between prescribers and pharmacies or other intended recipients of the medication order.	☒ Yes ☐ No
Ambulatory	AM 27.01	The system shall provide the ability to maintain a directory of all clinical personnel who currently use or access the system.	☒ Yes ☐ No
Ambulatory	AM 27.02	The system shall provide the ability to maintain a directory which contains identifiers required for licensed clinicians to support the practice of medicine including at a minimum state medical license, DEA, and NPI.	☐ Yes ☒ No
Ambulatory	AM 27.03	The system shall allow authorized users to update the directory.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Ambulatory	AM 27.04	The system shall provide the ability to create and maintain a directory of clinical personnel external to the organization who are not users of the system to facilitate communication and information exchange.	☐ Yes ☒ No
Ambulatory	AM 28.01	The system shall provide the ability to display a schedule of patient appointments, populated either through data entry in the system itself or through an external application interoperating with the system.	☒ Yes ☐ No
Ambulatory	AM 29.01	The system shall provide the ability to generate reports of clinical and administrative data using either internal or external reporting tools.	☒ Yes ☐ No
Ambulatory	AM 29.02	The system shall provide the ability to generate reports consisting of all or part of an individual patient's medical record (e.g. patient summary).	☒ Yes ☐ No
Ambulatory	AM 29.03	The system shall provide the ability to generate reports regarding multiple patients (e.g. diabetes roster).	☒ Yes ☐ No
Ambulatory	AM 29.04	The system shall provide the ability to specify report parameters (sort and filter criteria) based on patient demographic and clinical data (e.g., all male patients over 50 that are diabetic and have a HbA1c value of over 7.0 or that are on a certain medication).	☒ Yes ☐ No
Ambulatory	AM 29.05	The system shall provide the ability to access reports outside the EHR application.	☒ Yes ☐ No
Ambulatory	AM 29.06	The system shall provide the ability to produce reports based on the absence of a clinical data element (e.g., a lab test has not been performed or a blood pressure has not been measured in the last year).	☒ Yes ☐ No
Ambulatory	AM 29.07	The system shall provide the ability to save report	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		parameters for generating subsequent reports.	☐ No
Ambulatory	AM 29.08	The system shall provide the ability to modify one or more parameters of a saved report specification when generating a report using that specification.	☒ Yes ☐ No
Ambulatory	AM 30.01	The system shall provide the ability to define one or more reports as the formal health record for disclosure purposes.	☒ Yes ☐ No
Ambulatory	AM 30.02	The system shall provide the ability to generate hardcopy or electronic output of part or all of the individual patient's medical record.	☒ Yes ☐ No
Ambulatory	AM 30.03	The system shall provide the ability to generate hardcopy and electronic output by date and/or date range.	☒ Yes ☐ No
Ambulatory	AM 30.04	The system shall provide the ability to export structured data which removes those identifiers listed in the HIPAA definition of a limited dataset. This export on hardcopy and electronic output shall leave the actual PHI data unmodified in the original record.	☒ Yes ☐ No
Ambulatory	AM 30.05	The system shall provide the ability to create hardcopy and electronic report summary information (procedures, medications, labs, immunizations, allergies, and vital signs).	☒ Yes ☐ No
Ambulatory	AM 30.06	The system shall have the ability to provide support for disclosure management in compliance with HIPAA and applicable law.	☒ Yes ☐ No
Ambulatory	AM 31.02	The system shall provide the ability to document encounters by one or more of the following means: direct keyboard entry of text; structured data entry utilizing templates, forms, pick lists or macro substitution; dictation with subsequent transcription of voice to text, either manually or via voice recognition system.	☒ Yes ☐ No
Ambulatory	AM 31.03	The system shall provide the ability to associate	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		individual encounters with diagnoses.	☐ No
Ambulatory	AM 31.04	The system shall have the ability to provide filtered displays of encounters based on encounter characteristics, including date of service, encounter provider and associated diagnosis.	☒ Yes ☐ No
Ambulatory	AM 33.01	The system shall provide the ability to display medical eligibility obtained from patient's insurance carrier, populated either through data entry in the system itself or through an external application interoperating with the system.	☒ Yes ☐ No
Ambulatory	AM 34.02	The system shall provide the ability to specify the role of each provider associated with a patient, such as encounter provider, primary care provider, attending, resident, or consultant using structured data.	☒ Yes ☐ No
Ambulatory	AM 35.01	The system shall provide the ability to update the clinical content or rules utilized to generate clinical decision support reminders and alerts.	☒ Yes ☐ No
Ambulatory	AM 35.02	The system shall provide the ability to update clinical decision support guidelines and associated reference material.	☒ Yes ☐ No
Ambulatory	FN 18.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for variation from rule-based clinical messages (for example alerts and reminders).	☒ Yes ☐ No
Ambulatory	AM 36.02	The system shall provide a means to document a patient's dispute with information currently in their chart.	☒ Yes ☐ No
Ambulatory	AM 36.04	The system shall provide the ability to identify certain information as confidential and only make that accessible by appropriately authorized users.	☒ Yes ☐ No
Ambulatory	AM 36.05	The system shall provide the ability to prevent specified user(s) from accessing a designated patient's chart.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	AM 36.06	When access to a chart is restricted, the system shall provide a means for appropriately authorized users to "break the glass" for emergency situations.	☒ Yes ☐ No
Ambulatory	AM 37.01	The system shall provide the ability to retain data until otherwise purged, deleted, archived or otherwise deliberately removed.	☒ Yes ☐ No
Ambulatory	AM 39.01	The system shall provide the ability to export (extract) pre-defined set(s) of data out of the system.	☒ Yes ☐ No
Ambulatory	AM 40.01	The system shall provide the ability for multiple users to interact concurrently with the EHR application.	☒ Yes ☐ No
Ambulatory	AM 40.02	The system shall provide the ability for concurrent users to simultaneously view the same record.	☒ Yes ☐ No
Ambulatory	AM 40.03	The system shall provide the ability for concurrent users to view the same clinical documentation or template.	☒ Yes ☐ No
Ambulatory	AM 40.04	The system shall provide protection to maintain the integrity of clinical data during concurrent access.	☒ Yes ☐ No
Ambulatory	IO-AM 07.01	The system shall provide the ability to receive and store general laboratory results using the HL7 v.2.5.1 ORU message standard	☒ Yes ☐ No
Ambulatory	IO-AM 09.06	The system shall provide the ability to send an electronic prescription to pharmacy	☒ Yes ☐ No
Ambulatory	IO-AM 09.09	The system shall provide the ability to respond to a request for a refill sent from a pharmacy	☒ Yes ☐ No
Ambulatory	IO-AM 09.13	The system shall provide the ability to send a query to verify prescription drug insurance	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		eligibility and apply response to formulary and benefit files to determine coverage	☐ No
Ambulatory	IO-AM 09.14	The system shall provide the ability to capture and display formulary information from pharmacy or PBM (Pharmacy Benefits Manager) by applying eligibility response	☒ Yes ☐ No
Ambulatory	IO-AM 09.15	The system shall provide the ability to send a query for medication history to PBM or pharmacy to capture and display medication list from the EHR	☒ Yes ☐ No
Ambulatory	IO-AM 10.10	The system shall provide the ability to display HITSP C32/CCD documents and file them as intact documents in the EHR. Summary patient record content information will include: patient demographics, medication list, medication allergy list.	☒ Yes ☐ No
Ambulatory	IO-AM 10.20	The system shall provide the ability to generate and format patient summary documents per the following specifications: HITSP C32 (v2.3 or v2.5) Summary patient record content information will include: patient demographics, medications, medication allergies Generated xml documents must demonstrate use of industry-standard vocabularies/terminologies. The intent is to test the Required (R) fields, including the product coded terminology for the medication and medication allergy.	☒ Yes ☐ No
Ambulatory	PC 01.11	The system shall provide the ability for a clinical or other authorized user to view the full content of a finalized note. The full content of a finalized note includes the finalized note and any finalized modifications to that note including finalized changes referred to as corrections, clarifications, addenda, etc. Finalizing is the act of publishing into the system in a way that others may access information that has changed.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	PC 04.08	The system shall provide the ability to save a note in progress prior to finalizing the note.	☒ Yes ☐ No
Ambulatory	PC 08.01	The system shall have the ability to record and display the identity and credentials of all users who entered all or part of a note even if they did not finalize the note.	☒ Yes ☐ No
Ambulatory	SC 01.01	The system shall enforce the most restrictive set of rights/privileges or accesses needed by users/groups (e.g. System Administration, Clerical, Nurse, Doctor, etc.), or processes acting on behalf of users, for the performance of specified tasks.	☒ Yes ☐ No
Ambulatory	SC 01.02	The system shall provide the ability for authorized administrators to assign restrictions or privileges to users/groups.	☒ Yes ☐ No
Ambulatory	SC 01.03	The system must be able to associate permissions with a user using one or more of the following access controls: 1) user-based (access rights assigned to each user); 2) role-based (users are grouped and access rights assigned to these groups); or 3) context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	☒ Yes ☐ No
Ambulatory	SC 01.04	The system shall support removal of a user's privileges without deleting the user from the system. The purpose of the criteria is to provide the ability to remove a user's privileges, but maintain a history of the user in the system.	☒ Yes ☐ No
Ambulatory	SC 02.01	The system shall allow an authorized administrator to set the inclusion or exclusion of auditable events in SC 02.03 based on organizational policy & operating requirements/limits.	☒ Yes ☐ No
Ambulatory	SC 02.02	The system shall support logging to a common audit engine using the schema and transports specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA)	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		Profile.	
Ambulatory	SC 02.03	The system shall be able to detect security-relevant events that it mediates and generate audit records for them. At a minimum the events shall include those listed in the Appendix Audited Events. Note: The system is only responsible for auditing security events that it mediates. A mediated event is an event that the system has some active role in allowing or causing to happen or has opportunity to detect. The system is not expected to create audit logs entries for security events that it does not mediate.	☒ Yes ☐ No
Ambulatory	SC 02.04	The system shall record within each audit record the following information when it is available: (1) date and time of the event; (2) the component of the system (e.g. software component, hardware component) where the event occurred; (3) type of event (including: data description and patient identifier when relevant); (4) subject identity (e.g. user identity); and (5) the outcome (success or failure) of the event.	☒ Yes ☐ No
Ambulatory	SC 02.05	The system shall provide authorized administrators with the capability to read all audit information from the audit records in one of the following two ways: 1) The system shall provide the audit records in a manner suitable for the user to interpret the information. The system shall provide the capability to generate reports based on ranges of system date and time that audit records were collected. 2) The system shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. UTC synchronization).	☒ Yes ☐ No
Ambulatory	SC 02.06	The system shall be able to support time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.	☒ Yes ☐ No
Ambulatory	SC 02.07	The system shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. Example: "1994-11-05T13:15:30-05:00" corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	SC 02.08	The system shall prohibit all users read access to the audit records, except those users that have been granted explicit read-access. The system shall protect the stored audit records from unauthorized deletion. The system shall prevent modifications to the audit records.	☒ Yes ☐ No
Ambulatory	SC 03.01	The system shall authenticate the user before any access to Protected Resources (e.g. PHI) is allowed, including when not connected to a network e.g. mobile devices.	☒ Yes ☐ No
Ambulatory	SC 03.02	When passwords are used, the system shall support password strength rules that allow for minimum number of characters, and inclusion of alpha-numeric complexity.	☒ Yes ☐ No
Ambulatory	SC 03.03	The system upon detection of inactivity of an interactive session shall prevent further viewing and access to the system by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout shall be configurable.	☒ Yes ☐ No
Ambulatory	SC 03.04	The system shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The system shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	☒ Yes ☐ No
Ambulatory	SC 03.05	When passwords are used, the system shall provide an administrative function that resets passwords.	☒ Yes ☐ No
Ambulatory	SC 03.06	When passwords are used, user accounts that have been reset by an administrator shall require the user to change the password at next successful logon.	☒ Yes ☐ No
Ambulatory	SC 03.07	The system shall provide only limited feedback	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		information to the user during the authentication.	☐ No
Ambulatory	SC 03.08	The system shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Ambulatory	SC 03.09	When passwords are used, the system shall allow an authenticated user to change their password consistent with password strength rules (SC 03.02).	☒ Yes ☐ No
Ambulatory	SC 03.10	When passwords are used, the system shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Ambulatory	SC 03.11	When passwords are used, the system shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords.	☒ Yes ☐ No
Ambulatory	SC 03.12	When passwords are used, the system shall prevent the reuse of passwords previously used within a specific (configurable) timeframe (i.e., within the last X days, etc. - e.g. "last 180 days"), or shall prevent the reuse of a certain (configurable) number of the most recently used passwords (e.g. "last 5 passwords").	☒ Yes ☐ No
Ambulatory	SC 04.01	The system shall include documentation that describes the patch (hot-fix) handling process the vendor will use for EHR, operating system and underlying tools (e.g. a specific web site for notification of new patches, an approved patch list, special instructions for installation, and post-installation test).	☒ Yes ☐ No
Ambulatory	SC 04.02	The system shall include documentation that explains system error or performance messages to users and administrators, with the actions required.	☒ Yes ☐ No
Ambulatory	SC 04.03	The system shall include documentation of product capacities (e.g. number of users, number of transactions per second, number of records,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		network load, etc.) and the baseline representative configurations assumed for these capacities (e.g. number or type of processors, server/workstation configuration and network capacity, etc).	☐ No
Ambulatory	SC 04.04	The system shall include documented procedures for product installation, start-up and/or connection.	☒ Yes ☐ No
Ambulatory	SC 04.05	The system shall include documentation of the minimal privileges necessary for each service and protocol necessary to provide EHR functionality and/or serviceability.	☒ Yes ☐ No
Ambulatory	SC 04.06	The system shall include documentation available to the customer stating whether or not there are known issues or conflicts with security services in at least the following service areas: antivirus, intrusion detection, malware eradication, host-based firewall and the resolution of that conflict (e.g. most systems should note that full virus scanning should be done outside of peak usage times and should exclude the databases.).	☒ Yes ☐ No
Ambulatory	SC 04.07	If the system includes hardware, the system shall include documentation that covers the expected physical environment necessary for proper secure and reliable operation of the system including: electrical, HVAC, sterilization, and work area.	☒ Yes ☐ No
Ambulatory	SC 04.08	The system shall include documentation that itemizes the services (e.g. PHP, web services) and network protocols/ports (e.g. HL-7, HTTP, FTP) that are necessary for proper operation and servicing of the system, including justification of the need for that service and protocol. This information may be used by the healthcare facility to properly configure their network defenses (firewalls and routers).	☒ Yes ☐ No
Ambulatory	SC 04.09	The system shall include documentation that describes the steps needed to confirm that the system installation was properly completed and that the system is operational.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Ambulatory	SC 04.10	The system shall include documentation available to the customer that provides guidelines for configuration and use of the security controls necessary to support secure and reliable operation of the system, including but not limited to: creation, modification, and deactivation of user accounts, management of roles, reset of passwords, configuration of password constraints, and audit logs.	☒ Yes ☐ No
Ambulatory	SC 05.01	The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software ("malware"). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	☒ Yes ☐ No
Ambulatory	SC 05.02	The system shall be configurable to prevent corruption or loss of data already accepted into the system in the event of a system failure (e.g. integrating with a UPS, etc.).	☒ Yes ☐ No
Ambulatory	SC 06.01	The system shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as TLS, SSL, IPSec, XML encryptions, or S/MIME or their successors.	☒ Yes ☐ No
Ambulatory	SC 06.02	When passwords are used, the system shall not display passwords while being entered.	☒ Yes ☐ No
Ambulatory	SC 06.03	For systems that provide access to PHI through a web browser interface (i.e. HTML over HTTP) shall include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS). Note: Web browser interfaces are often used beyond the perimeter of the protected enterprise network	☒ Yes ☐ No
Ambulatory	SC 06.04	The system shall support protection of integrity of all Protected Health Information (PHI) delivered over the Internet or other known open networks	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		via SHA1 hashing and an open protocol such as TLS, SSL, IPSec, XML digital signature, or S/MIME or their successors.	
Ambulatory	SC 06.05	The system shall support ensuring the authenticity of remote nodes (mutual node authentication) when communicating Protected Health Information (PHI) over the Internet or other known open networks using an open protocol (e.g. TLS, SSL, IPSec, XML sig, S/MIME).	☒ Yes ☐ No
Ambulatory	SC 06.06	The system, when storing PHI on any device intended to be portable/removable (e.g. thumb-drives, CD-ROM, PDA, Notebook), shall support use of a standards based encrypted format using triple-DES (3DES), or the Advanced Encryption Standard (AES), or their successors.	☒ Yes ☐ No
Ambulatory	SC 06.07	The system, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The system should only be accessed by authorized users"). In the event that a system does not support pre-login capabilities, the system shall display the banner immediately following authorization.	☒ Yes ☐ No
Ambulatory	SC 08.01	The system shall be able to generate a backup copy of the application data, security credentials, and log/audit files.	☒ Yes ☐ No
Ambulatory	SC 08.02	The system restore functionality shall result in a fully operational and secure state. This state shall include the restoration of the application data, security credentials, and log/audit files to their previous state.	☒ Yes ☐ No
Ambulatory	SC 08.03	If the system claims to be available 24x7 then the system shall have ability to run a backup concurrently with the operation of the application.	☒ Yes ☐ No
Inpatient	IP 01.01	The system shall provide the ability to display bed assignment information including temporary bed assignment.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 01.02	The system shall provide the ability to identify the current physical location of any patient during their stay, to include the date and time the patient entered their current location.	☒ Yes ☐ No
Inpatient	IP 01.03	The system shall provide the ability to identify a patient record as restricted or no release of information.	☒ Yes ☐ No
Inpatient	FN 01.01	The system shall provide the ability to access demographic information such as name, date of birth and gender needed for patient care functions.	☒ Yes ☐ No
Inpatient	FN 01.02	The system shall capture and maintain demographic information as discrete data elements as part of the patient record.	☒ Yes ☐ No
Inpatient	FN 02.01	The system shall provide the ability to query for a patient by more than one form of identification.	☒ Yes ☐ No
Inpatient	IP 02.01	The system shall provide the ability to uniquely identify clinicians for the provision of care.	☒ Yes ☐ No
Inpatient	IP 02.02	The system shall provide the ability to assign clinicians to appropriate teams, where teams are defined as groups of clinicians who share responsibility for covering the same group of patients.	☒ Yes ☐ No
Inpatient	IP 02.04	The system shall provide the ability to specify the Admitting Physician.	☒ Yes ☐ No
Inpatient	IP 02.05	The system shall provide the ability to maintain a directory which identifies the physician by multiple unique identifiers.	☒ Yes ☐ No
Inpatient	FN 03.01	The system shall provide the ability to capture and maintain, as discrete data elements, the identity of all providers associated with a specific patient encounter.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 03.02	The system shall provide the ability to capture and maintain, as discrete data elements, the principal provider responsible for the care of an individual patient.	☒ Yes ☐ No
Inpatient	IP 03.01	The system shall provide for the ability to identify patients by status e.g. active, admitted patients or inactive, discharged patients.	☒ Yes ☐ No
Inpatient	FN 04.06	The system shall provide the ability to display different views of the problem / diagnosis list based upon the status of the problem.	☒ Yes ☐ No
Inpatient	IP 04.02	The system shall provide the ability to display the history of changes made to a specific problem / diagnosis, including clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 04.03	The system shall provide the ability to configure problem list documentation to allow the entry of free text problems and to display an alert of the implications of entering the free text (e.g. free text won't trigger decision support)	☒ Yes ☐ No
Inpatient	IP 04.05	When the display of the problem list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 04.06	The system shall provide the ability to modify documentation entered in error, maintaining a record of the original entry, identification of the clinician correcting the error and the date and time corrected.	☒ Yes ☐ No
Inpatient	IP 04.09	The system shall provide the ability to maintain a coded list of problems.	☒ Yes ☐ No
Inpatient	IP 04.11	The system shall provide the ability to search all patient records and identify individual patients with specific problems / diagnoses.	☒ Yes ☐ No
Inpatient	FN 04.01	The system shall provide the ability to capture, maintain and display free text comments associated with the problem / diagnosis.	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Inpatient	FN 04.02	The system shall provide the ability to capture, maintain and display, as discrete data elements, all problems associated with a patient.	☒ Yes ☐ No
Inpatient	FN 04.04	The system shall provide the ability to print a problem/diagnosis list.	☒ Yes ☐ No
Inpatient	FN 04.05	The system shall provide the ability to capture and maintain, as discrete data elements, the specific problem / diagnosis, user, date and time of all updates to the problem list.	☒ Yes ☐ No
Inpatient	FN 05.10	The system shall provide the ability to capture the source of the allergy information.	☒ Yes ☐ No
Inpatient	IP 05.02	The system shall provide the ability to capture the severity of an allergic or adverse reaction.	☒ Yes ☐ No
Inpatient	IP 05.03	The system shall provide the ability to record that the allergies are “Unknown” or “Unable to Assess Allergies.”	☒ Yes ☐ No
Inpatient	IP 05.04	The system shall provide the ability to require the documentation of patient allergies (inclusive of using such terms as Unknown or Unable to Assess) before completion of the medication order.	☒ Yes ☐ No
Inpatient	IP 05.05	When allergies are “Unknown” or “Unable to Assess Allergies,” the system shall provide the ability to require a reason to be documented.	☒ Yes ☐ No
Inpatient	IP 05.06	When allergies are “Unknown” or “Unable to Assess Allergies,” the system shall provide the ability to inform the clinician for the need of an update.	☒ Yes ☐ No
Inpatient	FN 05.12	The system shall provide the ability to display the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		allergy list, including date of entry.	☐ No
Inpatient	IP 05.08	When the display of the allergy list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 05.09	The system shall provide the ability to print the allergy list.	☒ Yes ☐ No
Inpatient	IP 05.10	The system shall provide the ability to change / add allergies directly from the allergy list and during medication ordering.	☒ Yes ☐ No
Inpatient	IP 05.11	The system shall provide the configurable ability to enter free text allergies and display them in a manner that distinguishes them from coded allergy entries.	☒ Yes ☐ No
Inpatient	IP 05.12	The system shall provide the ability to indicate that interaction checking will not occur against free text allergies.	☒ Yes ☐ No
Inpatient	IP 05.13	The system shall provide a mechanism to correct erroneous allergy documentation, displaying it as erroneous with the identification of the clinician correcting the allergy and the date and time of the correction.	☒ Yes ☐ No
Inpatient	FN 05.01	The system shall provide the ability to modify or inactivate an item on the allergy and adverse reaction list.	☒ Yes ☐ No
Inpatient	FN 05.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for inactivating or revising an item from the allergy and adverse reaction list.	☒ Yes ☐ No
Inpatient	FN 05.04	The system shall provide the ability to specify the type of allergic or adverse reaction in a discrete data field.	☒ Yes ☐ No
Inpatient	FN 05.05	The system shall provide the ability to capture and maintain, as discrete data, the identity of the user	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		who added, modified, inactivated or removed items from the allergy and adverse reaction list, including attributes of the changed items. The user ID and date/time stamp shall be recorded.	☐ No
Inpatient	FN 05.07	The system shall provide the ability for a user to explicitly capture and maintain, as discrete data, that the allergy list was reviewed. The user ID and date/time stamp shall be recorded when the allergies reviewed option is selected.	☒ Yes ☐ No
Inpatient	FN 05.09	The system shall provide the ability to explicitly indicate in a discrete field that a patient has no known drug allergies or adverse reactions.	☒ Yes ☐ No
Inpatient	FN 05.13	The system shall provide the ability to capture, maintain and display, as discrete data, lists of medications and other agents to which the patient has had an allergic or other adverse reaction.	☒ Yes ☐ No
Inpatient	IP 06.01	When the display of the medication list exceeds the current screen or printed page, the system shall indicate that the list continues.	☒ Yes ☐ No
Inpatient	IP 06.02	The system shall provide the ability to display the name of the ordering clinician, medication order (name, dose, route, and frequency), a start date and time, and an end date and time or duration for entries on the medication list.	☒ Yes ☐ No
Inpatient	IP 06.03	The system shall provide the ability to display on the medication list active medications that the patient brings from home to take while hospitalized, which the Pharmacy may not dispense.	☒ Yes ☐ No
Inpatient	IP 06.04	The system shall provide the ability to update the medication list with new medication orders, start date and time, end date and time or duration and pharmacy verification status.	☒ Yes ☐ No
Inpatient	FN 06.01	The system shall provide the ability to update and display a patient-specific medication list based on current medication orders or prescriptions.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 06.05	The system shall provide the ability to update the medication list with changes from pharmacist verification including pharmacist, date, and time.	☒ Yes ☐ No
Inpatient	IP 06.06	The system shall provide the ability to indicate the reason/ indication for the medication during order entry.	☒ Yes ☐ No
Inpatient	IP 06.07	The system shall provide the ability to record the reason or indication for the medication when recording historical or home medications.	☒ Yes ☐ No
Inpatient	IP 06.08	The system shall provide the ability to change / order medication directly from the medication list and that the same clinical decision support, alerts and interaction checking occurring during order entry also occur.	☒ Yes ☐ No
Inpatient	IP 06.09	The system shall provide the ability to change / order medication directly from med reconciliation.	☒ Yes ☐ No
Inpatient	IP 06.11	The system shall provide the ability to sort and filter the medication list.	☒ Yes ☐ No
Inpatient	IP 06.12	The system shall provide the configurable ability to enter free text medications and display them in a manner that distinguishes them from other medication entries.	☒ Yes ☐ No
Inpatient	IP 06.12.01	The system shall provide the ability to indicate that interaction checking will not occur against free text medications.	☒ Yes ☐ No
Inpatient	IP 06.16	The system shall provide the ability to display potential side effects of medications from the medication list.	☒ Yes ☐ No
Inpatient	FN 06.02	The system shall provide the ability to display a view that includes only active medications.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 06.04	The system shall provide the ability to print a current medication list.	☒ Yes ☐ No
Inpatient	FN 06.05	The system shall provide the ability to display that the patient takes no medications.	☒ Yes ☐ No
Inpatient	FN 06.06	The system shall provide the ability to capture and maintain, as discrete data elements, all current medications including over-the-counter and complementary medications such as vitamins, herbs and supplements.	☒ Yes ☐ No
Inpatient	IP 07.01	The system shall provide the ability to display test results during the ordering process.	☒ Yes ☐ No
Inpatient	IP 07.02	The system shall provide the ability to display test results during medication administration.	☒ Yes ☐ No
Inpatient	IP 08.01	The system shall provide the ability to display patient name, identification number, and age or date of birth on all order screens.	☒ Yes ☐ No
Inpatient	IP 08.04	The system shall provide the ability to display an indicator that the patient has allergies (allergies exist), or no known allergies, on all order screens.	☒ Yes ☐ No
Inpatient	IP 08.05	The system shall provide the ability to document a verbal order (including telephone orders); documentation shall include the ordering clinician as well as the clinician taking the verbal order.	☒ Yes ☐ No
Inpatient	IP 08.07	The system shall provide the ability to document a verification “read-back” of the complete order by the person receiving the telephone or verbal order.	☒ Yes ☐ No
Inpatient	IP 08.09	The system shall provide the ability to include urgency status in orders.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 08.10	The system shall provide the ability for clinicians to write all patient care orders electronically, including, but not limited to nursing care, medications / immunizations, diagnostic testing, nutrition and food service, consultation, and blood products.	☒ Yes ☐ No
Inpatient	IP 08.11	The system shall provide the ability to renew, modify, and discontinue orders.	☒ Yes ☐ No
Inpatient	IP 08.13	For each order type, the system shall provide the ability to capture and display the identity of the user, the date and the time when the order is signed, co-signed, renewed, modified or discontinued.	☒ Yes ☐ No
Inpatient	IP 08.14	The system shall provide the ability to display order history for any order, including the ordering clinician, order details, date, and time.	☒ Yes ☐ No
Inpatient	IP 08.15	The system shall provide the ability to set or configure the entry fields available for each order by order type.	☒ Yes ☐ No
Inpatient	IP 08.16	The system shall provide the ability to set or configure which fields are required for a complete order by order type.	☒ Yes ☐ No
Inpatient	IP 08.17	The system shall provide the ability to configure orders within order sets with default order details.	☒ Yes ☐ No
Inpatient	IP 08.18	The system shall provide the ability for the ordering provider to include free text comments or instructions in the order to be viewed by providers departments/services fulfilling the order or service.	☒ Yes ☐ No
Inpatient	IP 08.19	The system shall provide the ability to associate an order of any type (including medication order) with a related clinical problem(s) and/or diagnosis code(s) and description.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 08.20	The system shall provide the ability to allow the entry of orders to be activated at a future date and time including admission orders, discharge orders, and post-op orders.	☒ Yes ☐ No
Inpatient	IP 08.22	The system shall provide the ability to print orders for all order types.	☒ Yes ☐ No
Inpatient	IP 08.24	The system shall provide the ability to enter conditional orders that can be activated when certain criteria and conditions are met.	☒ Yes ☐ No
Inpatient	IP 08.26	The system shall provide the ability for a clinician to save frequently used and institutionally approved orderables or order sets as “favorites” or "preferences" to facilitate retrieval and ordering.	☒ Yes ☐ No
Inpatient	IP 08.27	The system shall provide the ability to display orders for a patient by different views.	☒ Yes ☐ No
Inpatient	FN 09.05	The system shall provide the ability for cosigned orders to retain and display the identities of all providers who co-sign the order.	☒ Yes ☐ No
Inpatient	IP 08.30	The system shall provide the ability to electronically communicate the order to the receiving departmental system.	☒ Yes ☐ No
Inpatient	FN 09.02	The system shall provide the ability to view status information for ordered services.	☒ Yes ☐ No
Inpatient	IP 08.32	The system shall provide the ability to designate access to entering individual orders by user role.	☒ Yes ☐ No
Inpatient	FN 09.01	The system shall provide the ability to require problem / diagnosis as an order component.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 09.04	The system shall provide the ability to capture and maintain, as discrete data, a diagnosis/problem code or description associated with an order of any type (including prescriptions and medications ordered for administration).	☒ Yes ☐ No
Inpatient	IP 12.30	The system shall be capable of designating explicit routes for medications and prohibit selection of other routes during the ordering process.	☒ Yes ☐ No
Inpatient	IP 09.01	The system shall provide the ability to define user roles with access to order set management.	☒ Yes ☐ No
Inpatient	IP 09.02	The system shall provide the ability to support the management of order sets to track history of updates including date and time.	☒ Yes ☐ No
Inpatient	IP 09.03	The system shall provide the ability to include date last modified in the display of order sets.	☒ Yes ☐ No
Inpatient	IP 09.04	The system shall provide the ability to configure order sets with pre-selected orders.	☒ Yes ☐ No
Inpatient	IP 09.05	The system shall provide the ability to incorporate multiple choices of medications or other types of orders within an order set for clinician selection.	☒ Yes ☐ No
Inpatient	IP 09.16	The system shall provide the ability to incorporate text instructions or recommendations within order sets.	☒ Yes ☐ No
Inpatient	IP 09.17	The system shall provide the ability to display individual orders in order sets with pre-selected order details.	☒ Yes ☐ No
Inpatient	IP 09.18	The system shall provide the ability to restrict access to individual order sets by user role or department	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 09.19	The system shall provide the ability to display active links within an order set to applicable clinical standards and reference materials.	☒ Yes ☐ No
Inpatient	FN 11.02	The system shall provide the ability to allow users to search for order sets by name.	☒ Yes ☐ No
Inpatient	IP 09.22	The system shall provide the ability to display orders in an order set in the same manner as when the order is placed individually.	☒ Yes ☐ No
Inpatient	IP 09.28	The system shall provide the ability to embed order sets within other order sets.	☒ Yes ☐ No
Inpatient	FN 11.03	The system shall provide the ability to apply drug-drug and drug-allergy interaction checking in the same way to orders placed through an order set as to orders placed individually.	☒ Yes ☐ No
Inpatient	IP 09.32	The system shall provide the ability to report on the use of order sets, including data such as orders, ordering provider, date/time ordered and basic patient data (for example age, diagnoses).	☒ Yes ☐ No
Inpatient	FN 10.01	The system shall provide the ability to define a set of items to be ordered as a group.	☒ Yes ☐ No
Inpatient	FN 10.02	The system shall provide the ability to modify order sets.	☒ Yes ☐ No
Inpatient	FN 10.03	The system shall provide the ability to include in an order set order types including but not limited to medications, laboratory tests, imaging studies, procedures and referrals.	☒ Yes ☐ No
Inpatient	FN 11.01	The system shall provide the ability for individual orders in an order set to be selected or deselected by the user.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 11.04	The system shall provide the ability to display orders placed through an order set either individually or as a group.	☒ Yes ☐ No
Inpatient	IP 10.01	The system shall have the ability to report on the ordering of nonformulary medications	☒ Yes ☐ No
Inpatient	IP 08.02	The system shall provide the ability to display the patient's weight, or an indicator that the patient has a weight recorded, on medication ordering screens.	☒ Yes ☐ No
Inpatient	IP 08.03	The system shall provide the configurable ability to display the patient's body surface area, or an indicator that the patient has a body surface area recorded, on medication ordering screens.	☒ Yes ☐ No
Inpatient	IP 10.03	The system shall provide the ability to order medication doses in mg/kg and mL/kg.	☒ Yes ☐ No
Inpatient	IP 10.04	The system shall provide the ability to allow the clinician to order medication doses in mg/kg/min, microgram/kg, and microgram/kg/min.	☒ Yes ☐ No
Inpatient	IP 10.06	The system shall provide end-users with the ability to browse or search for a drug by therapeutic class when ordering a medication.	☒ Yes ☐ No
Inpatient	IP 10.08	The system shall provide the ability to renew an existing medication order without requiring re-entry of order information.	☒ Yes ☐ No
Inpatient	IP 10.09	The system shall provide the ability for order entry of medications that are brought in from home that the Pharmacy is not dispensing.	☒ Yes ☐ No
Inpatient	IP 10.10	The system shall provide the ability to document complex medication orders that include dosing based on either physical status or laboratory values.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 10.11	The system shall provide the ability to enter all order details for medication orders that include dosing adjustments and limits.	☒ Yes ☐ No
Inpatient	IP 10.12	The system shall provide the ability to display the eMAR without interrupting the ordering process.	☒ Yes ☐ No
Inpatient	IP 10.14	The system shall provide the ability to modify medication orders including dosing information without having to discontinue the order.	☒ Yes ☐ No
Inpatient	IP 10.15	The system shall provide the ability to configure orders that require co-signature.	☒ Yes ☐ No
Inpatient	IP 10.16	The system shall provide the ability to enter medication orders utilizing a sliding scale.	☒ Yes ☐ No
Inpatient	IP 10.26	The system shall provide the ability to compute drug doses, based on appropriate dosage ranges, using the patient's body surface area and ideal body weight.	☒ Yes ☐ No
Inpatient	IP 10.27	The system shall provide the ability to automatically alert the provider to missing or invalid data required to compute a dose.	☒ Yes ☐ No
Inpatient	FN 07.01	The system shall provide the ability to alert the user at the time a new medication is prescribed/ordered that drug interaction, allergy, and formulary checking will not be performed against the uncoded medication or free text medication.	☒ Yes ☐ No
Inpatient	FN 07.02	The system shall provide the ability to prescribe/order uncoded and non-formulary medications.	☒ Yes ☐ No
Inpatient	FN 07.03	The system shall provide the ability to maintain a coded list of medications including a unique identifier for each medication.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 07.04	The system shall provide end-users the ability to search for medications by generic or brand name.	☒ Yes ☐ No
Inpatient	FN 07.05	The system shall provide the ability to access reference information for prescribing/ordering.	☒ Yes ☐ No
Inpatient	FN 07.06	The system shall provide the ability to specify medication order details including dose, route, frequency and comments. Dose, route and frequency must be captured and maintained as discrete data.	☒ Yes ☐ No
Inpatient	FN 12.01	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and current medications and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Inpatient	FN 12.04	The system shall provide the ability to display, on demand, potential allergies and drug-drug interactions between current medications.	☒ Yes ☐ No
Inpatient	FN 12.05	The system shall provide the ability to view the rationale for a drug interaction alert.	☒ Yes ☐ No
Inpatient	FN 12.06	The system shall provide the ability to capture and maintain at least one reason for overriding any drug-drug or drug-allergy interaction warning triggered at the time of medication prescribing/ordering.	☒ Yes ☐ No
Inpatient	FN 12.07	The system shall provide the ability to enter a structured response when overriding a drug-drug or drug-allergy warning.	☒ Yes ☐ No
Inpatient	FN 12.08	The system shall provide the ability to prescribe/order a medication despite alerts for interactions and/or allergies being present.	☒ Yes ☐ No
Inpatient	FN 12.09	The system shall provide the ability to accept updates to drug interaction databases	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
			☐ No
Inpatient	IP 11.01	The system shall provide the ability to allow the designation of the source of information on home medications.	☒ Yes ☐ No
Inpatient	IP 11.07	The system shall provide the ability to display home medications for provider review for medication reconciliation during writing of admission orders.	☒ Yes ☐ No
Inpatient	IP 11.08	At admission and discharge from the hospital, the system shall provide the ability to permit the clinician to designate which home medications are being continued / discontinued.	☒ Yes ☐ No
Inpatient	IP 11.09	At admission, the system shall provide the ability to display corresponding inpatient orders for home medications the provider designates as being continued.	☒ Yes ☐ No
Inpatient	IP 11.10	At each change in level of care (to ICU, to surgery, discharge), the system shall display prior, active medication orders for provider review during writing of admission/transfer orders.	☒ Yes ☐ No
Inpatient	IP 11.11	At discharge and each change in level of care, the system shall provide the ability to designate which current medications are continued / discontinued, and to display the orders for continued medications.	☒ Yes ☐ No
Inpatient	IP 11.13	At admission, discharge, and each change in level of care during the hospital stay, the system shall capture signature that medication reconciliation has been completed.	☒ Yes ☐ No
Inpatient	IP 11.14	At admission, discharge, and each change in level of care, the system shall provide the ability to retain the history of medication reconciliation (including prior medications reviewed, medications continued/discontinued, new medication orders, signature of each provider completing review) for subsequent review.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 11.15	At discharge, the system shall provide the ability to communicate, both electronically and via paper, discharge medications and allergies.	☒ Yes ☐ No
Inpatient	IP 11.16	At discharge, the system shall provide the ability to communicate, both electronically and via paper, current weight (including date and time of measurement).	☒ Yes ☐ No
Inpatient	IP 12.01	The system shall provide the ability to detect a drug dose that falls outside the min-max range for a single dose for the medication and to inform the clinician during ordering.	☒ Yes ☐ No
Inpatient	FN 08.01	The system shall provide the ability to detect a daily dose that exceeds the recommended range for patient age and inform the user during ordering.	☒ Yes ☐ No
Inpatient	IP 12.04	The system shall provide the ability to detect a cumulative dose (across inpatient stays and lifetime) that exceeds the recommended dose and inform the clinician during ordering.	☒ Yes ☐ No
Inpatient	IP 12.11	The system shall be capable of providing advance notification during ordering, for patients on a given medication, when they are due for required laboratory or other diagnostic studies to monitor for therapeutic or adverse effects of the medication.	☒ Yes ☐ No
Inpatient	IP 12.12	The system shall provide the ability to search from medication lists which use “Tall Man” letters.	☒ Yes ☐ No
Inpatient	IP 12.14	The system shall provide the ability to identify when multiple medications of the same therapeutic or pharmacologic class are ordered and inform the user when medications are selected during prescribing / ordering.	☒ Yes ☐ No
Inpatient	IP 12.15	The system shall provide the ability to exclude therapeutic categories and drug pairs from drug-drug interaction and therapeutic overlap checking.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 12.16	The system shall provide the ability to assign the level of medication checking based upon user role.	☒ Yes ☐ No
Inpatient	FN 12.10	The system shall provide the ability to check for potential interactions between medications to be prescribed/ordered and medication allergies listed in the record and alert the user at the time of medication prescribing/ordering if potential interactions exist.	☒ Yes ☐ No
Inpatient	FN 12.11	The system shall provide the ability, when a new allergy is documented, to check for a potential interaction between the newly-documented allergy and the patient's current medications, and alert the user if such interactions exist.	☒ Yes ☐ No
Inpatient	IP 12.23	The system shall provide the ability to set the severity level at which drug interaction warnings should be displayed.	☒ Yes ☐ No
Inpatient	FN 12.02	The system shall provide the ability to check immunization orders against documented patient allergies (medication and non-medication) and inform the user during prescribing/ordering.	☒ Yes ☐ No
Inpatient	IP 12.25	The system shall provide the configurable ability to require documentation of information regarding patient weight, inclusive of using such terms as Unknown, before entering medication orders.	☒ Yes ☐ No
Inpatient	IP 12.26	The system shall provide the ability to inform the clinician about potential drug-food interactions.	☒ Yes ☐ No
Inpatient	IP 12.27	The system shall provide the ability to check contraindications based on pregnancy status	☒ Yes ☐ No
Inpatient	IP 12.28	The system shall provide the ability to check contraindications based on lactation status	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 12.29	The system shall provide the ability to check for inappropriate route of administration and alert the user at time of medication prescribing / ordering.	☒ Yes ☐ No
Inpatient	IP 12.31	The system shall provide the ability to display recommended medication for substitution (based on cost or clinical policy).	☒ Yes ☐ No
Inpatient	IP 12.33	The system shall provide the ability to transmit to Pharmacy the order override justification with the order and clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 12.35	The system shall provide the ability to capture and store information concerning alerts following screening of medication orders and the response (place, modify or cancel order).	☒ Yes ☐ No
Inpatient	IP 12.36.01	The system shall have the ability to report on alerts and provider response occurring during the medication ordering process (place, modify, cancel)	☒ Yes ☐ No
Inpatient	IP 12.41	The system shall provide the ability to enter new vaccine dosing schedules into the system in advance of official CDC schedule updates.	☒ Yes ☐ No
Inpatient	FN 08.03	The system shall provide the ability to check for dose ranges based on patient age.	☒ Yes ☐ No
Inpatient	FN 08.04	The system shall provide the ability to display a dose calculator for patient-specific dosing based on weight.	☒ Yes ☐ No
Inpatient	FN 08.05	The system shall provide the ability to display patient specific dosing recommendations based on age and weight.	☒ Yes ☐ No
Inpatient	FN 08.06	The system shall provide the ability to check for medication contraindications based on patient age and alert the user during prescribing/ordering.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 13.01	The system shall provide drug-diagnosis interaction alerts at the time of medication prescribing/ordering.	☒ Yes ☐ No
Inpatient	IP 13.01	The system shall provide the ability to display relevant, patient-specific laboratory test results when entering an order.	☒ Yes ☐ No
Inpatient	IP 13.04	The system shall provide the ability to display for selection a secondary, or corollary, order that is recommended in conjunction with the primary order.	☒ Yes ☐ No
Inpatient	IP 13.05	The system shall allow demographic criteria to be used as a data element in clinical decision support rules.	☒ Yes ☐ No
Inpatient	FN 18.02	The system shall provide the ability to capture and maintain, as discrete data, the reason for variation from rule-based clinical messages (for example alerts and reminders).	☒ Yes ☐ No
Inpatient	IP 13.08	The system shall provide the ability to set elapsed time parameters for purposes of duplicate order checking.	☒ Yes ☐ No
Inpatient	IP 14.01	The system shall provide the ability to present medications to be administered over a selectable date/time range during the current hospital stay.	☒ Yes ☐ No
Inpatient	IP 14.02	The system shall provide the ability to display the medication administration history including administering clinician, date, and time.	☒ Yes ☐ No
Inpatient	IP 14.03	The system shall provide the ability to display the ordered date, time, route of administration and dose of all scheduled medications.	☒ Yes ☐ No
Inpatient	IP 14.05	The system shall allow the clinician to identify and display due and overdue medications.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.06	The system shall provide the ability to display continuous infusions in a manner that distinguishes them from other medications.	☒ Yes ☐ No
Inpatient	IP 14.07	The system shall provide the ability to display PRN medications in a manner that distinguishes them from other medications.	☒ Yes ☐ No
Inpatient	IP 14.08	The system shall provide the ability to record the effectiveness of PRN or "as needed" doses after they have been administered on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.10	The system shall have the ability to view on the eMAR medications as dispensed (including dose and quantity of dispensed units of medication).	☒ Yes ☐ No
Inpatient	IP 14.11	The system shall provide the ability to indicate any clinical interventions or assessments associated with medication administration.	☒ Yes ☐ No
Inpatient	IP 14.12	The system shall provide the ability to attach a comment to an individual scheduled medication dose and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 14.13	The system shall provide the ability to capture medication administration details as discrete data, including: (1) the medication name, strength and dose; (2) date and time of administration; (3) route and site; (4) user name and credentials.	☒ Yes ☐ No
Inpatient	IP 14.14	The system shall provide the ability to view the medication order as written during administration.	☒ Yes ☐ No
Inpatient	IP 14.15	The system shall provide the ability to document clinical assessment pertinent to medication administration.	☒ Yes ☐ No
Inpatient	IP 14.16	The system shall provide the ability to display, from the eMAR, the location of the medication on the unit.	☐ Yes ☒ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.17	The system shall allow the user to capture and display patient specific instructions or other free text on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.18	The system shall provide ability for a second provider to witness and co-document administration.	☒ Yes ☐ No
Inpatient	IP 14.19	The system shall provide the ability to document medication administration using a barcode and scanner for positive patient identification, patient name, med name, med dose, correct time of admin, route and positive identification of care giver administering medication.	☒ Yes ☐ No
Inpatient	IP 14.20	When using barcode scanners, the system shall provide the ability to alert the end user that the medication being administered has triggered one or more of the following errors: wrong patient, wrong med, wrong time, wrong route or wrong dose.	☒ Yes ☐ No
Inpatient	IP 14.23	The system shall provide the ability to modify medication administration schedules on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.24	The system shall provide the ability to notify the Pharmacy of changes in schedules on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.25	The system shall provide the ability to acknowledge medication orders prior to administration, capturing the date, time and user performing action.	☒ Yes ☐ No
Inpatient	IP 14.26	The system shall provide the ability to allow documentation of medication administration prior to pharmacy review.	☒ Yes ☐ No
Inpatient	IP 14.27	The system shall provide the ability to document on the eMAR that a medication was given by another provider.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 14.28	The system shall provide the ability for the hospital to provide links to reference information / knowledge resources for any medication on the eMAR.	☒ Yes ☐ No
Inpatient	IP 14.29	The system shall provide the ability to capture and maintain, as discrete data, the reason a medication was not given.	☒ Yes ☐ No
Inpatient	IP 14.30	The system shall provide the ability to amend medication administration documentation and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 06.13	The system shall provide the ability to correct medication administration documentation entered in error, maintaining a record of the original entry, identification of the clinician correcting the error and the date and time of the correction.	☒ Yes ☐ No
Inpatient	IP 14.31	The system shall provide ability to document a reaction / response to medication administration.	☒ Yes ☐ No
Inpatient	IP 14.32	The system shall maintain and display as part of the medication administration profile the dates and times associated with the medication orders such as start, modify, and stop dates.	☒ Yes ☐ No
Inpatient	IP 14.34	The system shall provide the ability for the eMAR to be printed.	☒ Yes ☐ No
Inpatient	FN 14.01	The system shall provide the ability to produce patient instructions and patient educational materials which may reside within the system or be provided through links to external source.	☒ Yes ☐ No
Inpatient	IP 15.01	The system shall provide the ability to display immunization administration history including; administering clinician, date and time, immunization name, lot number, manufacturer and expiration date.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 15.03	The system shall provide the ability to identify and display due and overdue ordered immunizations.	☒ Yes ☐ No
Inpatient	IP 15.04	The system shall provide the ability to indicate any tasks/assessments associated with immunization administration.	☒ Yes ☐ No
Inpatient	IP 15.05	The system shall provide the ability to attach a comment to an individual scheduled immunization dose and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 15.06	The system shall provide the ability to display the immunization order as written during administration.	☒ Yes ☐ No
Inpatient	IP 15.07	The system shall provide the ability to document clinical assessment pertinent to immunization administration.	☒ Yes ☐ No
Inpatient	IP 15.09	The system shall provide the ability to amend immunization administration documentation and include as part of the legal medical record.	☒ Yes ☐ No
Inpatient	IP 15.10	The system shall provide the ability to document that a Vaccine Information Statement (VIS) was given including the version or edition date of the VIS.	☒ Yes ☐ No
Inpatient	IP 15.11	The system shall provide the ability to print the immunization administration record.	☒ Yes ☐ No
Inpatient	IP 15.12	The system shall have the ability to record the consent, refusal, or deferral status as it relates to the administration of each immunization at the time of each encounter, including: the date and time, the decision (consent, refusal or deferral), name of decider and status of decider (e.g. parent, self, legal guardian, medical power of attorney).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	FN 16.02	The system shall provide the ability to capture, in a discrete field, an allergy/adverse reaction to a specific immunization.	☒ Yes ☐ No
Inpatient	FN 16.03	The system shall provide the ability to capture immunization administration details as discrete data, including: (1) the immunization type and dose; (2) date and time of administration; (3) route and site; (4) lot number and expiration date; (5) manufacturer; and (6) user ID.	☒ Yes ☐ No
Inpatient	IP 16.01	The system shall provide the ability to display, in the eMAR, drug-allergy interactions at the time of administration.	☒ Yes ☐ No
Inpatient	IP 16.02	System shall provide the ability to require entry of physiological parameters or task completion that must be checked and recorded prior to medication administration	☒ Yes ☐ No
Inpatient	IP 16.03	The system shall provide the ability to display, at the time of medication administration, that an alert was triggered during medication ordering.	☒ Yes ☐ No
Inpatient	IP 16.05	The system shall provide the ability for medication screening alerts to be displayed from the eMAR.	☒ Yes ☐ No
Inpatient	IP 16.08	The system shall provide the ability to capture medication identification for five rights checking, at a minimum, from linear bar code labels encoding the NDC number.	☒ Yes ☐ No
Inpatient	IP 16.09	The system shall provide the ability to document medication administration using a positive ID technology to confirm right patient, right medication, right dose, right time, and right route.	☒ Yes ☐ No
Inpatient	IP 16.10	The system shall have the ability to document "manual" methods verifying Five Rights information (e.g., Bar code does not work; the bar code reader is not working).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 16.11	The system shall provide the ability to record the medication NDC number or other identification number of the drug actually administered to the patient.	☒ Yes ☐ No
Inpatient	IP 16.12	The system shall be able to identify all patients on a specific medication.	☒ Yes ☐ No
Inpatient	IP 17.01	The system shall provide the ability to establish time periods for designating medication administration tasks overdue.	☒ Yes ☐ No
Inpatient	IP 17.02	The system shall provide the ability to establish time periods and recipients for notification of overdue medication administrations.	☒ Yes ☐ No
Inpatient	IP 17.03	The system shall provide the ability to notify the clinician of overdue medication administrations.	☒ Yes ☐ No
Inpatient	IP 17.04	The system shall provide the ability to establish time periods for order expiration for types of orders.	☒ Yes ☐ No
Inpatient	IP 17.05	The system shall provide the ability to notify the ordering clinician concerning orders due to expire.	☒ Yes ☐ No
Inpatient	IP 17.08	The system shall provide the ability to notify the ordering clinician concerning orders requiring signature (verbal and telephone orders, co signature).	☒ Yes ☐ No
Inpatient	FN 17.01	The system shall provide the ability to access and review medication information (such as drug monograph). This may reside within the system or be provided through links to external sources.	☒ Yes ☐ No
Inpatient	FN 17.02	The system shall provide the ability to provide access to test and procedure instructions that can be modified by the end user.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	IP 19.01	The system shall provide the ability to display patient data from previous admissions.	☒ Yes ☐ No
Inpatient	IP 19.02	The system shall provide the ability to include patient identifying information as well as time and date report printed, on each page of individual patient-specific reports generated.	☒ Yes ☐ No
Inpatient	IP 19.08	The system shall provide the ability to indicate that advance directive(s) have been completed.	☒ Yes ☐ No
Inpatient	IO-IP 01.01	The system shall provide the ability to receive the Current Medication List from Pharmacy (directly), PBM (directly) or via intermediary network (e.g. SureScripts, RxHub, etc.)	☒ Yes ☐ No
Inpatient	IO-IP 01.20	The system shall provide the ability to display HITSP C32/CCD documents and file them as intact documents in the EHR. Summary patient record content information will include: patient demographics, medication list, medication allergy list	☒ Yes ☐ No
Inpatient	IO-IP 01.22	The system shall provide the ability to generate and format patient summary documents per the following specifications: HITSP C32 (v2.3 or v2.5) Summary patient record content information will include: patient demographics, medications, medication allergies Generated xml documents must demonstrate use of industry-standard vocabularies/terminologies. The intent is to test the Required (R) fields including the product coded terminology for the medication and medication allergy.	☒ Yes ☐ No
Inpatient	IO-IP 03.01	The system shall provide the ability to receive Patient Demographics and Administrative Information from inpatient IT systems (e.g., name,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		age, DOB, gender)	☐ No
Inpatient	IO-IP 03.04	The system shall provide the ability to send Non-Medication Orders and Updates to receiving system (e.g., LIS, RIS, Dietary)	☒ Yes ☐ No
Inpatient	IO-IP 03.05	The system shall provide the ability to send Medication Orders and Updates to Pharmacy IT system utilizing a coding system for medications	☐ Yes ☒ No
Inpatient	IO-IP 03.06	The system shall provide the ability to receive Status Updates from Pharmacy	☐ Yes ☒ No
Inpatient	IO-IP 03.07	The system shall provide the ability to provide access and view capabilities for relevant lab results for medication ordering or administration	☒ Yes ☐ No
Inpatient	IO-IP 03.10	The system shall provide the ability to Integrate with bar-code technology to capture information from linear bar code labels and wristbands	☒ Yes ☐ No
Inpatient	IO-IP 04.01	The system shall provide the ability to send an electronic prescription of discharge medications	☒ Yes ☐ No
Inpatient	SC 01.01	The system shall enforce the most restrictive set of rights/privileges or accesses needed by users/groups (e.g. System Administration, Clerical, Nurse, Doctor, etc.), or processes acting on behalf of users, for the performance of specified tasks.	☒ Yes ☐ No
Inpatient	SC 01.02	The system shall provide the ability for authorized administrators to assign restrictions or privileges to users/groups.	☒ Yes ☐ No
Inpatient	SC 01.03	The system must be able to associate permissions with a user using one or more of the following access controls: 1) user-based (access rights assigned to each user); 2) role-based (users are grouped and access rights assigned to these groups); or 3) context-based (role-based with additional access rights assigned or restricted	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	
Inpatient	SC 01.04	The system shall support removal of a user's privileges without deleting the user from the system. The purpose of the criteria is to provide the ability to remove a user's privileges, but maintain a history of the user in the system.	☒ Yes ☐ No
Inpatient	SC 02.01	The system shall allow an authorized administrator to set the inclusion or exclusion of auditable events in SC 02.03 based on organizational policy & operating requirements/limits.	☒ Yes ☐ No
Inpatient	SC 02.02	The system shall support logging to a common audit engine using the schema and transports specified in the Audit Log specification of IHE Audit Trails and Node Authentication (ATNA) Profile.	☒ Yes ☐ No
Inpatient	SC 02.03	The system shall be able to detect security-relevant events that it mediates and generate audit records for them. At a minimum the events shall include those listed in the Appendix Audited Events. Note: The system is only responsible for auditing security events that it mediates. A mediated event is an event that the system has some active role in allowing or causing to happen or has opportunity to detect. The system is not expected to create audit logs entries for security events that it does not mediate.	☒ Yes ☐ No
Inpatient	SC 02.04	The system shall record within each audit record the following information when it is available: (1) date and time of the event; (2) the component of the system (e.g. software component, hardware component) where the event occurred; (3) type of event (including: data description and patient identifier when relevant); (4) subject identity (e.g. user identity); and (5) the outcome (success or failure) of the event.	☒ Yes ☐ No
Inpatient	SC 02.05	The system shall provide authorized administrators with the capability to read all audit information from the audit records in one of the	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		following two ways: 1) The system shall provide the audit records in a manner suitable for the user to interpret the information. The system shall provide the capability to generate reports based on ranges of system date and time that audit records were collected. 2) The system shall be able to export logs into text format in such a manner as to allow correlation based on time (e.g. UTC synchronization).	☐ No
Inpatient	SC 02.06	The system shall be able to support time synchronization using NTP/SNTP, and use this synchronized time in all security records of time.	☒ Yes ☐ No
Inpatient	SC 02.07	The system shall have the ability to format for export recorded time stamps using UTC based on ISO 8601. Example: "1994-11-05T08:15:30-05:00" corresponds to November 5, 1994, 8:15:30 am, US Eastern Standard Time.	☒ Yes ☐ No
Inpatient	SC 02.08	The system shall prohibit all users read access to the audit records, except those users that have been granted explicit read-access. The system shall protect the stored audit records from unauthorized deletion. The system shall prevent modifications to the audit records.	☒ Yes ☐ No
Inpatient	SC 03.01	The system shall authenticate the user before any access to Protected Resources (e.g. PHI) is allowed, including when not connected to a network e.g. mobile devices.	☒ Yes ☐ No
Inpatient	SC 03.02	When passwords are used, the system shall support password strength rules that allow for minimum number of characters, and inclusion of alpha-numeric complexity.	☒ Yes ☐ No
Inpatient	SC 03.03	The system upon detection of inactivity of an interactive session shall prevent further viewing and access to the system by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout shall be configurable.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 03.04	The system shall enforce a limit of (configurable) consecutive invalid access attempts by a user. The system shall protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	☒ Yes ☐ No
Inpatient	SC 03.05	When passwords are used, the system shall provide an administrative function that resets passwords.	☒ Yes ☐ No
Inpatient	SC 03.06	When passwords are used, user accounts that have been reset by an administrator shall require the user to change the password at next successful logon.	☒ Yes ☐ No
Inpatient	SC 03.07	The system shall provide only limited feedback information to the user during the authentication.	☒ Yes ☐ No
Inpatient	SC 03.08	The system shall support case-insensitive usernames that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Inpatient	SC 03.09	When passwords are used, the system shall allow an authenticated user to change their password consistent with password strength rules (SC 03.02).	☒ Yes ☐ No
Inpatient	SC 03.10	When passwords are used, the system shall support case-sensitive passwords that contain typeable alpha-numeric characters in support of ISO-646/ECMA-6 (aka US ASCII).	☒ Yes ☐ No
Inpatient	SC 03.11	When passwords are used, the system shall use either standards-based encryption, e.g., 3DES, AES, or standards-based hashing, e.g., SHA1 to store or transport passwords.	☒ Yes ☐ No
Inpatient	SC 03.12	When passwords are used, the system shall prevent the reuse of passwords previously used within a specific (configurable) timeframe (i.e.,	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		within the last X days, etc. - e.g. "last 180 days"), or shall prevent the reuse of a certain (configurable) number of the most recently used passwords (e.g. "last 5 passwords").	☐ No
Inpatient	SC 04.01	The system shall include documentation that describes the patch (hot-fix) handling process the vendor will use for EHR, operating system and underlying tools (e.g. a specific web site for notification of new patches, an approved patch list, special instructions for installation, and post-installation test).	☒ Yes ☐ No
Inpatient	SC 04.02	The system shall include documentation that explains system error or performance messages to users and administrators, with the actions required.	☒ Yes ☐ No
Inpatient	SC 04.03	The system shall include documentation of product capacities (e.g. number of users, number of transactions per second, number of records, network load, etc.) and the baseline representative configurations assumed for these capacities (e.g. number or type of processors, server/workstation configuration and network capacity, etc).	☒ Yes ☐ No
Inpatient	SC 04.04	The system shall include documented procedures for product installation, start-up and/or connection.	☒ Yes ☐ No
Inpatient	SC 04.05	The system shall include documentation of the minimal privileges necessary for each service and protocol necessary to provide EHR functionality and/or serviceability.	☒ Yes ☐ No
Inpatient	SC 04.06	The system shall include documentation available to the customer stating whether or not there are known issues or conflicts with security services in at least the following service areas: antivirus, intrusion detection, malware eradication, host-based firewall and the resolution of that conflict (e.g. most systems should note that full virus scanning should be done outside of peak usage times and should exclude the databases.).	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 04.07	If the system includes hardware, the system shall include documentation that covers the expected physical environment necessary for proper secure and reliable operation of the system including: electrical, HVAC, sterilization, and work area.	☒ Yes ☐ No
Inpatient	SC 04.08	The system shall include documentation that itemizes the services (e.g. PHP, web services) and network protocols/ports (e.g. HL-7, HTTP, FTP) that are necessary for proper operation and servicing of the system, including justification of the need for that service and protocol. This information may be used by the healthcare facility to properly configure their network defenses (firewalls and routers).	☒ Yes ☐ No
Inpatient	SC 04.09	The system shall include documentation that describes the steps needed to confirm that the system installation was properly completed and that the system is operational.	☒ Yes ☐ No
Inpatient	SC 04.10	The system shall include documentation available to the customer that provides guidelines for configuration and use of the security controls necessary to support secure and reliable operation of the system, including but not limited to: creation, modification, and deactivation of user accounts, management of roles, reset of passwords, configuration of password constraints, and audit logs.	☒ Yes ☐ No
Inpatient	SC 05.01	The software used to install and update the system, independent of the mode or method of conveyance, shall be certified free of malevolent software (“malware”). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	☒ Yes ☐ No
Inpatient	SC 05.02	The system shall be configurable to prevent corruption or loss of data already accepted into the system in the event of a system failure (e.g. integrating with a UPS, etc.).	☒ Yes ☐ No
Inpatient	SC 06.01	The system shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known	☒ Yes

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
		open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as TLS, SSL, IPSec, XML encryptions, or S/MIME or their successors.	☐ No
Inpatient	SC 06.02	When passwords are used, the system shall not display passwords while being entered.	☒ Yes ☐ No
Inpatient	SC 06.03	For systems that provide access to PHI through a web browser interface (i.e. HTML over HTTP) shall include the capability to encrypt the data communicated over the network via SSL (HTML over HTTPS). Note: Web browser interfaces are often used beyond the perimeter of the protected enterprise network	☒ Yes ☐ No
Inpatient	SC 06.04	The system shall support protection of integrity of all Protected Health Information (PHI) delivered over the Internet or other known open networks via SHA1 hashing and an open protocol such as TLS, SSL, IPSec, XML digital signature, or S/MIME or their successors.	☒ Yes ☐ No
Inpatient	SC 06.05	The system shall support ensuring the authenticity of remote nodes (mutual node authentication) when communicating Protected Health Information (PHI) over the Internet or other known open networks using an open protocol (e.g. TLS, SSL, IPSec, XML sig, S/MIME).	☒ Yes ☐ No
Inpatient	SC 06.06	The system, when storing PHI on any device intended to be portable/removable (e.g. thumb-drives, CD-ROM, PDA, Notebook), shall support use of a standards based encrypted format using triple-DES (3DES), or the Advanced Encryption Standard (AES), or their successors.	☒ Yes ☐ No
Inpatient	SC 06.07	The system, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The system should only be accessed by authorized users"). In the event that a system does not support pre-login capabilities, the system shall display the banner immediately following authorization.	☒ Yes ☐ No

Ambulatory or Inpatient	CCHIT Criteria ID Number	Criteria	Proposer Licensed Software complies with the criteria
Inpatient	SC 08.01	The system shall be able to generate a backup copy of the application data, security credentials, and log/audit files.	☒ Yes ☐ No
Inpatient	SC 08.02	The system restore functionality shall result in a fully operational and secure state. This state shall include the restoration of the application data, security credentials, and log/audit files to their previous state.	☒ Yes ☐ No
Inpatient	SC 08.03	If the system claims to be available 24x7 then the system shall have ability to run a backup concurrently with the operation of the application.	☒ Yes ☐ No

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2.1.2 BEST PRACTICES

Provide Proposer's overall summary description of how it has leveraged best practices for EHR implementations, pursuant to Section 1.2 (Best Practices) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

MethodM is Cerner's implementation approach to working with clients to deliver value through our Millennium solutions. MethodM is more than an implementation approach and this modular methodology draws upon proven practices from a host of past client experiences. With it, a team is able to deliver the intended outcomes of a project with discipline, predictability and efficiency.

MethodM provides a disciplined approach to implementation, system adoption and value realization. The proven methodology provides a clearly defined project scope that aligns with your project's clinical and operational imperatives and comprehensive education and training objectives. MethodM also incorporates Cerner's recommended practices in the management of crucial project milestones and detailed solution-level content to provide guidance and overall support throughout the project. The content has been designed to provide the correct information at the right point in the engagement to help you make sound decisions and guide you through every stage of your project. Additionally, the content provides a framework for the various processes required to manage and execute your project.

As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership.

Cerner MethodM is an integrated platform, providing these important features:

1. Outcomes-based approach
2. Aligning with your organizational imperatives
3. Disciplined and predictable processes
4. Providing the right resource at the right time
5. Leveraged client interaction and experience
6. Proven to reduce risk and variability
7. A logical continuum
8. From procurement to clinical transformation

2.1.3 GENERAL REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for ambulatory care, pursuant to Section 1.3 (General Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 6 pages.

The strength of Cerner Millennium begins with the power of its architecture, which is based on one comprehensive database. Cerner Millennium solutions are structured around a single design, which allows information sharing across multiple facilities and across the continuum of healthcare. With our single data structure, Cerner Millennium provides real-time access to all information across multiple applications, such as laboratory, pharmacy, nursing and physicians, to all of those needing such access, regardless of location. Other suppliers' systems that are based on differing architectures and data structures must be interfaced together, and rely on these interfaces to transmit, modify and arrange data exchanged between them. This limits the data's usefulness across multiple systems and inhibits real-time access.

Only Cerner Millennium offers proven, person-centric, integrated clinical technologies that connect all areas of a healthcare organization to leverage patient data and best practices for better quality of care. Any clinical information that is gathered in any care setting is populated in the single integrated longitudinal electronic medical record. The clinical data repository viewer is designed to support communication across the health system by providing a cross- departmental cross-disciplinary, person focused view of clinical information. Because it is built from the common, open platform for all Cerner solutions, we can provide the only readily available solution that closes the loop with other clinical domains.

Flexible display features within the Cerner Millennium applications allow the clinician to create optimal views of the data. A multitude of viewing and navigation preferences can be utilized to maximize the communication of information to the clinician, both as predefined views as well as interactively during real-time record viewing. These tailored summary views and custom flowsheets can be defined to meet the needs of various disciplines within your organization.

Cerner offers a variety of applications and features that enable our client organizations to become HIPAA compliant. However, compliance requirements in the areas of Privacy and Security rules also are very much contingent on your organization's policies and procedures regarding patient information and how it is to be used or disclosed.

Under ARRA HITECH, the patient has the right to ask for disclosure of their record to be restricted

from their health plan if the patient has paid for the services out of pocket. We embed capabilities to leverage existing system capabilities for disclosure management to complement the necessary policies and procedures within HIM to assure that such disclosure restrictions can be honored.

Also, as required for meaningful use Stage 1, the patient has the right to ask for an electronic copy of their record in a readable format (and as required by Stage 1 certification criteria, in the form of a structured electronic clinical document using either the HL7 Continuity of Care Document (CCD) or the ASTM Continuity of Care Record (CCR) format). Cerner supports these requirements through the use of the Clinical Document Generator (CDG) which is a common service that can be called from within PowerChart to enable a provider requested on demand generation of the CCD, from within Clinical Reporting, and through the patient portal into the electronic health record, IQHealth, where a patient can generate their own CCD if desired, and otherwise have access online into their electronic health record. Cerner also enables the CCD to be sent to the Cerner Health Record which can be made available as a personal health record (PHR) to the patient.

Cerner Millennium is based on an integrated common architecture and data structure, thus improving communication of information across the health care enterprise. Common information spans inpatient, outpatient, specialty clinics and even home care, with no redundant entry of clinical or administrative information. Any clinical information that is gathered in any care setting, from the first encounter to the last, is populated in the electronic medical record and is seamlessly integrated. Therefore, clinical data captured within various care settings is automatically and transparently accessible to the entire care team via our electronic medical record. This integrated system enables all care providers sharing a common care process to function as a team. Upon an inpatient admission, users with proper security can fluidly access any information regarding the patient's current encounter or past encounters. Similarly, if an emergency Department (ED) patient is admitted all medications and activities are available throughout your system once they are documented in the Electronic Medical Record. The record a physician views in the hospital is the exact same record in an office setting, thereby creating "one single source of truth" patient record.

Cerner Millennium software is built around the patient. The technology enables health organizations to automate clinical, financial and decision support functions on a common platform. This approach allows Cerner to infuse decision support (Executable Knowledge) throughout the care process, guiding clinicians to the latest evidence at the point of care via order sets, plans of care, alerts and notifications, and documentation.

For example, during order entry, Cerner's order management and decision support solution ensure that information and alerts are available to all users at the appropriate time and in the appropriate venue such as duplicate order checking, an integrated drug database, dose-range checking, and adverse drug event content. In addition, your organization can define actions required within an order, order set, or care plan such as automatically route for co-signature.

Cerner's rules engine, Discern Expert, provides a view of the big picture to make the most knowledgeable decisions. That is why Discern Expert does not just keep track of physician orders, it obtains and uses patient data from across your entire organization – lab, pharmacy, nursing, radiology – and across multiple facilities within your health care system, to provide the most accurate decision support and alerts system available. The sophisticated decision-support functionality is offered within a rules logic model and a simple and intuitive user interface design that simplifies the everyday use and management of this critical function for the organization. Alerts can be designed based on various parameters and triggers, and can be adjusted by those with appropriate security within your organization. When an order triggers an alert, the alert message

describes the potential problem and offers specific suggestions for revising the order. The alert can also prompt the clinician for more information to determine if a particular guideline applies. The clinician can review a documented explanation of the alert, select an alternative order, or override the alternative order guidelines while recording a reason. Such decision-support can reduce clinical errors, improve physicians' management of medication use, imaging studies, and lab tests, provide long-term savings by recommending preventive screenings, and track physicians' compliance.

Cerner Millennium supports interdisciplinary care and enhanced workflow options. Additionally, multiple features benefit teaching and residency programs such as the physician rounds report, easily accessible evidence-based condition- specific protocol information, and enhanced routing for supervisor signatures. Furthermore, our CareCompass provides an innovative, interdisciplinary workflow tool that guides the collaborative care team in the organization and prioritization of patient care-giving the right information at the right time. With CareCompass, clinicians see all tasks and overdue tasks are highlighted. For example, an admission assessment requiring interdisciplinary documentation and co-signature can indicate that tasks exist for the attending physician's review and signature.

The unique scalability of Cerner Millennium® allows us to connect communities and integrate healthcare on a massive scale – integration that is necessary to improve the standard of care as people increasingly move and receive treatment from multiple providers in different cities and countries. Krames Staywell instruction comes in the following languages: English, Spanish, Russian, Vietnamese, Tagalog, Chinese, Korean, Hmong, Farsi, Arabic, Portuguese and Armenian. ExitCare titles come in the following languages: English, Spanish, Russian, Vietnamese, Tagalog, Portuguese, Bosnian, and Haitian Creole. All titles may not be available in all languages. Krames provides every handout in Spanish and English. Cerner is a leader in supporting NCQA's PCMH criteria as seen by being awarded the 2008 CHIME award for enabling a medical home with the University of Missouri. Further, we have 9 clients that have achieved recognition from NCQA and many more going thru the process today.

The tracking and audit capabilities of the system are comprehensive as well as flexible. You can perform an audit trail query to access data specific to the patient's record or chart, who obtained successful access, the date and time of the attempt and information regarding the access event, including events that change or modify patient information. It should be noted that any actual change to patient data is considered part of the clinical record and the history of any such change is maintained within the patient's record.

We support incoming and outgoing HL7 ADT messaging with multiple registration systems. Each system can send individual transactions, or transactions from multiple facilities can be combined in an interface engine and sent to Cerner Millennium in one feed. We store the facility that generates the transaction.

Position-level security logic, sets permission to access an application or a task within an application, or a task group based on a user's position. Positions are defined for every user in the system.

A user is assigned to a position through the user maintenance tool. A user's position is designed to include all the tasks that might be needed to perform his or her job. Multiple users with similar job requirements can be associated with a single position, which aids in the maintenance of security profiles. Only users with appropriate privileges are granted access to the user maintenance tool.

You can perform an audit trail query to access data specific to the patient's record or chart, who obtained successful access, the date and time of the attempt and information regarding the access event, including events that change or modify patient information.

Cerner provides a comprehensive documentation solution, not specific to a particular care setting, through which direct care providers document patient care activities. We provide a catalog of forms that support documentation across multiple disciplines. Your organization can use these forms as defined or customize to meet your individual needs. The assessment forms capture appropriate data elements and can include charting by exception, predefined drop-down lists, defaulting of the last charted value, grid formats, yes/no responses, pick lists, and check boxes for point and click responses. The data elements captured can then populate the other areas of the chart. When used with Cerner Millennium's clinical systems, such as Cerner ED solution FirstNet, INet Critical Care, PathNet for lab, PharmNet for pharmacy, Clinical Office with PowerNote, Health Information Management, RadNet, and SurgiNet, the information provided by the areas employing these systems is accessible automatically and transparently to the care team member via the graphical results viewer within the electronic medical record. The clinical data repository viewer provides a cross-departmental, cross-disciplinary, person focused view of clinical information with the ability to view, endorse, and correct documentation.

Cerner Millennium is well suited for supporting pediatrics, as well as other specialties. For example, we supply pediatric documentation including growth charts and forms, notes and care plans, specifically tailored views and flowsheets, and related referential content. By infusing Cerner's solutions with pediatric specific content and capabilities, caregivers can enhance the care of children, close the research and education gap and share the expertise of the pediatric community. Some examples include: Special terminology and information includes a full pediatric lexicon that can be invoked at age appropriate times and includes developmental milestones, physical findings, social, and environmental factors. Age based normal ranges are part of our standard content. Time of birth is captured and can be used to calculate age in hours, days, months, and years. A large variety of pediatric dosing calculators exist including body surface area, body mass index, weight, age, gestational age, hepatic function, and problem and diagnosis.

Cerner Millennium aggregates clinical and financial information from a variety of sources, therefore all information, from the first encounter to the last, whether in an ambulatory or in patient setting, resides in our longitudinal relational database. Users at your organization have immediate access to the entire patient record, including information from current and past visits. For example lab results, reports of diagnostic tests, documentation, orders, and more are all viewable immediately upon entry into the system by multiple users. The record a physician views in the hospital is the exact same record in an office setting, thereby creating "one single source of truth" patient record.

Cerner's careplan solution, PowerPlan, provides clinicians with the ability to individualize diagnosis and problem-driven plans of care, including multidisciplinary clinical pathways and care protocols. Plans of care can relate to problems/diagnoses in the build tool. Once a problem or diagnoses has been documented, the system can prompt clinicians with suggested care plans to address the identified problem. The clinician can view the suggested plans of care then accept or reject the plan. The diagnosis or problem focused/driven plan can then be initiated and customized to meet the needs of the patient. In addition, an assessment with calculated results and embedded rules can trigger orders that can include an order for a plan of care.

When activated, plans of care initiate orders and orders populate the CareCompass with tasks to be completed and the MAR with medications. Clinical documentation from the CareCompass, Document in Plan tab, the MAR, as well as new results , auto update the plan of care as appropriate. The plan provides alerts with visual indicators of outcomes not met (red bold circled "X") and a green check for met. The CareCompass and MAR provide prompts and alerts associated with the plan outcomes, interventions, and indicators. Summary views provide a concise view of outcomes

indicating the patient's progress toward goals and discharge readiness. In addition, evidence links are present in outcome and intervention sections. Clicking a link takes the clinician to referential information about potential interventions to support the plan of care.

Cerner's Women's Health solution, PowerChart Maternity, provides clinicians across role and venue the ability to leverage information captured, stored and presented for review at the appropriate time for the purpose to reduce the risk of injury to the pregnant woman and her infant. The solution is integrated with the patient's medical record, condition specific, and helps automate the nursing and provider workflows. In addition, FetaLink is our software application intended to support the display needs of obstetrical clinicians through the rendering, visualization, recording, and optional storage and retrieval of fetal and maternal data acquired from fetal monitoring devices and their peripheral equipment. Cerner FetaLink also provides the capability for management of supplemental user-definable visual and audible alert thresholds. Cerner FetaLink can be used to show graphically the relationship between uterine contractions and fetal heart rate data at the bedside or at remote locations as a surveillance method. The device connectivity portion of FetaLink is the conduit through which the data flows into the FetaLink/CareAware architecture to provide the data to the application from the fetal monitor. FetaLink is dependent upon a device network infrastructure that provides fetal monitor device connectivity (CareAware iBus). In addition, if exercising the storage capabilities of the application, it is necessary to have an archival system to provide storage and retrieval of the archived records (CareAware MultiMedia Archive).

Documents such as facesheets and wristbands can be produced at admission time. The content and number of each document is customizable and can include barcoding.

Label functionality is available with Cerner's registration solution. Additionally, creating and printing labels is available with Cerner's scheduling solution with custom reporting. Customized reports can be created by your organization using the reporting tools included.

Cerner will provide you with solutions and services that enable organizational HIPAA compliance. We have taken steps to train our client-facing associates regarding HIPAA Privacy and Security requirements, and we have instituted corporate security, privacy, patient information handling, and remote access policies to support those responsibilities.

Cerner is continually developing our solutions using a solution management model approach to analyze client requests, market demands, industry standards, trends, and client feedback to define requirements and priorities for future solution enhancements. Our mobile solutions continue to evolve with focus on access to patient information, workflow and ease of use functionality, and identified clinician process models. Future enhancements and upgrades continue to be developed and released on a regular basis. We would be happy to demonstrate our current capabilities and further discuss future enhancements in the mobile access arena.

Cerner's comprehensive order management solution is one part of the Cerner approach to managing patient information effectively. Our orders solution coordinates order management and communication across all licensed, hospital-based facilities and forms the basis for Cerner's computerized provider order entry (CPOE) solution. With the physician workflow in mind, you can view existing orders and perform all order actions, such as repeating or canceling an order, without ever leaving the orders section. During the ordering process, the system performs a series of checks to evaluate for contraindications, duplication, or conflicts. When necessary, an alert will open allowing you to decide whether to continue. In combination with Cerner's pharmacy offering and nursing solutions Cerner's CPOE solution provides a powerful tool to connect the closed loop medication management process, linking physicians, nurses, and pharmacies to improve patient

safety.

Cerner Millennium solutions offer a flexible design that can be customized on three levels: system, institution, and end user. Throughout the various workflows alerts, windows, prompts, screens and data entry fields can be defined to meet your needs. For example, Cerner has developed over 500 alerts and rules in addition to documentation and reports to support evidenced-based workflows. All of the Cerner developed rules and alerts are embedded within the application, and are actionable at the point of care within the workflow of the care provider. In addition, your organization can create additional alerts and rules, as well as additional user-defined data fields to meet your documentation needs.

We provide an Advanced Growth Chart used to assess a child's development against statistical ranges of values for children of various ages, comparing the child's growth to other children of the same age. You can also use advanced growth chart to plot other developmental data such as bone age and mid-parental height. Our growth chart content is representative of the 2000 CDC growth charts. Clinicians document height, weight, and head circumference on the growth chart. The chart displays percentiles based on statistics gathered across the United States (2000 CDC statistics). The percentiles are 97%, 95%, 90%, 75%, 50%, 25%, 10%, 5%, and 3%. The patient's values are plotted against national percentiles and displayed in a linear graph format. Comparing these values to national figures can help the clinician determine how the child's development compares to normative rates of development. The charts can display values for male and female, and two different age ranges (along the x-axis): 0 to 36 months and 2 to 20 years. In addition, we provide the tanis fenton premature growth chart.

A referral to another physician can be initiated with a message sent from the Message Center if the consulting physician is a user within your organization. Due to the true integration of Cerner Millennium, the appropriate referral forms can be forwarded to physicians within your organization. As a result, the consulting physician is able to use order entry functionality to generate any orders. A subsequent letter can be sent back to the primary care physician with documentation of the encounter. Users can also create referral letters that can be printed and sent to outside clinicians.

2.1.4 REGISTRATION REQUIREMENTS

Provide Proposer's detailed description of how its proposed EHR System meets the needs of DHS for registration, pursuant to Section 1.4 (Registration Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's registration solution is an online Admit-Discharge-Transfer (ADT) system for automating the workflow and process of registration, admitting, transfers, and discharges in any clinical domain, including hospitals, physician offices, and clinics. Cerner registration solution creates the encounter and a Cerner Enterprise Master Person Index (EMPI) that become the basis for coordinating the person's movement across an integrated or disparate health system.

Within Cerner's registration solution, each person entering the healthcare system is automatically assigned a lifetime medical record number (MRN), or "account" number.

All persons added to the system are added to the Cerner Enterprise Master Person Index. This includes next-of-kin, guarantors, subscribers, and emergency contacts. All visit activity has a relationship to a record within the Cerner Enterprise Master Person Index. The Cerner Enterprise Master Person Index can be used as the foundation of each encounter. The Cerner Enterprise Master Person Index information captured within Cerner's registration solution is the same data used

throughout Cerner Millennium. Modifications within Cerner's registration solution are immediately viewable within such Cerner solutions as PowerChart, Cerner Order Management, and Cerner Scheduling Management.

Cerner's registration solution provides multiple rules functionality options, as follows: interfield rule; finish level rule; start rule. Within Cerner's registration solution, an interfield rule is a rule that is placed behind a particular prompt in the registration conversation, for example behind the date of birth prompt. A finish level rule is placed at the end of the registration conversation and it is activated when OK is selected to save the data. A start level rule is placed at the beginning of the registration conversation (before any prompts) and activates as the conversation is opening.

Customized registration screens enable you to enter insurance plan information at both the person and encounter levels. Insurance data can be gathered at the person level, which is the starting point for visits to facilities within the enterprise. Up to six subscriber insurance plans can be captured per person and per encounter.

Employment and plan sponsor information can be entered into the database to expedite billing and reimbursement. The Insurance tool provided allows you to enter health plan information for insurance organizations and associate those health plans with sponsors (employers).

Membership uploads can be performed with payer-provided information to assign relationships between persons and their health plans.

Label functionality is available with Cerner's registration solution. Additionally, creating and printing labels is available with Cerner's scheduling solution with custom reporting. Customized reports can be created by your organization using the reporting tools included.

Documents such as facesheets and wristbands can be produced at admission time. Standard documents/reports are available. Additionally, the content and number of each document is customizable and can include bar coding. Admission, transfer, and discharge notices can be produced at the time of admission/transfer/discharge.

Cerner's registration solution supports the modification of an encounter type through the utilization of various screen types that automate tasks or ADT transactions. Your organization can configure screens that perform additions/updates to encounters.

The pre-registration (pre-admission) conversation functionality provides the ability to gather and verify the minimum required information prior to booking an appointment or non-scheduled encounter.

Cerner's registration solution provides an Episode Manager tool that is used to group related encounters in an episode type. The grouping of encounters makes it easier to view registration information for a particular course of treatment. You can add an episode type and include encounters in it or give a new name to an existing episode type. An encounter can be moved from one episode type to another episode type or designated as an unattached encounter. If an episode type is deleted, its encounters display in a list of unattached encounters.

Cerner's registration solution screen building tool supports the creation of a quick registration with minimal required fields.

With the implementation of Cerner's Master Person Index solution, the Combine tool's online work queue includes a percent column, which reflects the probability that two people in the queue are a match. You can manually display potential duplicates side by side to review what information is the same and what information is different. Potential duplicates that meet the report threshold are written to the appropriate database table. The system reads this table to populate the work queue.

The Combine Tool that is provided is used to eliminate duplicate records by combining persons and encounters in the database. You can also separate (un-combine) person and encounter records that were combined in error. Combine also provides the ability to remove a single encounter from one person's record and add it to another person's record. This can be necessary if an encounter was mistakenly assigned to the wrong person.

Cerner's registration solution work queue manager is used to build worklists to aid in task management. This application allows you to create a worklist, which is launched out of the Access Management Office application. The worklists can be built as a simple task list, an associated conversation, or as a list only. The simple task list has the ability for a custom update script to be created by your organization to perform an update in the database when an item on the worklist is selected. The associated conversation allows a registration conversation to be launched from the worklist which in turn allows you to modify the visit or person information. A list-only worklist provides the ability to drop the row off of the query upon selection; thereby performing a database update.

Ad hoc filtering functionality is also available during the build process of the worklists. Ad hoc filtering allows you to designate a specific field value, date, location, organization, person, provider, or text to be filtered upon.

The tasks in the work queues are automatically assigned task numbers. The numbers can then be used to grant or restrict access to a task in the Task Access application. You can select a worklist and then launch an application to perform appropriate transactions for a selected person or item. List-only work queues can also be created. These work queues do not require that you launch an application to perform a task.

Cerner's registration solution provides an encounter location history viewer which provides the ability to view admit, transfer, and discharge history for a person's visit. Cerner's registration solution also provides the ability to display the temporary/current location as well as assigned location via a column in the bed board. The historical tracking of the temporary location is provided within the History Maintenance module.

Additionally, within Cerner's Bed Board application or a registration conversation, the ability to assign or remove the assignment of a temporary location to a person is supported. Within the Bed Board, the person displays in the assigned nurse unit/room/bed. A temporary location column is available that can be added as a bed board column to view the temporary location of the person. Additionally, your organization can define a user-defined field to designate the status of the person. User-defined fields can also be added as bed board columns. In reference to tracking persons from pre-admission to discharge, the location history is viewable for the person in the Location History tool or using the History Maintenance module in Access Office. The dirty bed worklist can be used monitor bed statuses. Additionally, within Cerner's scheduling solution, the check-in, check-out, and person wait time is provided to assist with person tracking functionality.

Cerner's registration and benefit solutions provide easy-to-use, front-end tools that can be used to create the reference database for insurance carriers, health plans, and benefits. Within the tools provided the information is as easy to modify as it is to build. For example, if a payer makes some type of change (i.e. change in phone number) you can access the specific tool for that information and make the change accordingly.

2.1.5 SCHEDULING REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for scheduling, pursuant to Section 1.5 (Scheduling Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner Scheduling Management coordinates appointment scheduling across an integrated or disparate health system. It is used to establish and maintain person appointments for resources with defined availability.

Protocol appointment types can be defined to allow you to schedule one appointment type that in turn schedules multiple appointments with predefined time ranges separating them.

Appointment types include recurring. You define the sequence and the number of instances needed for the appointment. The system automatically calculates the appropriate days based on entered data.

Group scheduling functionality provides the ability to schedule and specify the number of persons to be scheduled for a specific appointment type.

Within Cerner's scheduling solution, CPT 4 codes can be associated to the appointment type or orderable as part of the database build. During scheduling the user can then enter the appropriate IDC9/10 diagnosis.

Integration between Cerner applications is seamless.

Cerner's scheduling solution supports the ability to define data fields to capture appointment specific information. This information can be defined by department or specialty.

Client-defined preparations and post appointment instructions can be associated to appointment types.

Scheduling guidelines are guidelines that are displayed to users during various stages of the scheduling process such as confirm, reschedule, and cancel.

The flexing functionality provided allows you to define rules at the appointment type, resource, orders, and slot type level. These rules are evaluated to determine how appointments should be scheduled in certain circumstances. Appointment details captured are flexed due to the accept format associated. The ability to define different fields for inclusion is supported. The accept format can be defined at the appointment level or various scheduling actions, allowing for the same accept format to be flexed to display different fields based upon the scheduling action for the appointment type. We do not limit the number of details that can be present on an accept format. Most clients average between 3-5. We recommend you add the amount needed to be able to book appropriately without impacting the users workflow.

Cerner's benefits solution maintains the terms and conditions of relationships among members, employers, providers, and payers to enable integration of these relationships within clinical and financial processes. This solution manages information related to insurance plans and member demographics, EDI eligibility verification, detailed coverage and benefit information, and referral and authorization management for members and provider networking. Cerner's benefits solution includes Cerner's eligibility solution, which provides the initiation and storage of the Electronic Data Interchange (EDI) for specific and relative information related to the health plan. An EDI transaction is sent via the Cerner application to a third party clearinghouse in order to capture the health plan eligibility verification information. The status of the verification is returned as part of the appropriate application and is displayed and stored for reference. History, audit and reporting tools are available as applicable within each application.

Within Cerner's scheduling solution, CPT 4 codes are associated to the appointment type or orderable as part of the build. The user can then enter the appropriate IDC9/10 diagnosis when entering the information specific to the patient and appointment. With this information, the system can perform a medical necessity check using 3M's Medicare Medical Necessity content. The content contains the Local Medical Review Policies (LMRP) and the National Coverage Determinations (NCD). As part of the workflow, the user is notified if an Advance Beneficiary Notification (ABN) is required to be signed. The user has the option to print the ABN form immediately or to print the ABN form at a later time in the process, from Cerner's scheduling solution. All appointments that require an ABN can have an icon displayed or users can view from a worklist. We also offer a standalone Medical Necessity Checking Tool that allows the user to enter the diagnosis and procedure codes to be checked against the 3M Medical Necessity Content. The ABN form can also be printed from this standalone tool.

Each appointment type is associated with an unlimited number of schedulable resources (person, place, or thing, including patient). The system automatically takes into account the availability of each of the resources when determining if the appointment can be scheduled at the requested time.Tight integration of Cerner's scheduling solution with underlying Cerner applications ensures optimum use of resources and promotes patient satisfaction with timely, sequenced care. Costs are reduced, since coordinated scheduling ensures proper resource utilization.

Revenues can be increased, because streamlined scheduling increases operational efficiencies and patient throughput, freeing up more time in the day to schedule additional appointments.

Cerner supports 5,000+ default schedules. The number of default schedules recommended is dependent on how your organization defines other scheduling factors such as slot types, appointment types, and locations for clinics. The more these factors are individualized, the more default schedules are potentially needed. Your organization can define and build a virtually unlimited number of schedule templates for individual resources, or one template can be used for multiple resources. A schedule template is made up of slots of time that are applied to a day or range of days. Schedule templates can be created by facility for resources and procedures.

Limitations to resources created is applicable if a resource is built but then not properly associated to a resource role, without the role present the resource cannot be scheduled.

Resource roles are typically based on the clinic type or service as a starting point for the grouping. The same resource can be associated to many different resource roles. Based on the statistics provided, we would recommend your organization have 100+ resource roles defined.

Reception module in Cerner is a combination of Departmental Order Entry (DOE) for managing direct attenders and the Scheduling day book to view daylists and arrive scheduled patients as they attend. Both applications are available to the receptionist through a single sign-on using the App Bar. The App Bar allows the receptionist, and all users, to have all the functions they require through a single click, with no need to re-logon each time. DOE supports procedure order entry and review functionality. The functions provided help you accomplish the following tasks:

- Admit a patient and order procedures using a single function.
- Place orders and request additional procedures.
- Cancel procedures.
- List each patient's ordered procedures, exam status, and patient, order, or result comments.
- Scan any paper documents related to the patients attendance.

The Appointment book provides the receptionist with a graphical day book, displaying current patient status and other details as defined locally. Day book views are defined locally and can be for single locations/resources, groups of locations/resources or all locations/resources. The receptionist can arrive the patient directly from the graphical view indicating electronically to the radiographer that the patient has arrived and is ready for their procedure.

Cerner's perioperative solution also includes an integrated scheduling component that shares the same database and architecture as all Cerner Millennium solutions. Surgery scheduling performs conflict checking on all schedulable resources for the appointment. With block scheduling capabilities, you can define blocks of time that particular resources and appointments can be scheduled into. These blocks can be defined at the surgeon, surgeon group, patient type, procedure, and/or specialty/service levels. Blocks can be layered and automatically released at user-defined points in time to another block, or to open scheduling. We also provide detailed reporting to analyze block utilization. Other surgery scheduling features include automatic case-duration calculation based on historical case information, request list capabilities, suggestions for appointment times, appointment notifications, and linked appointments. Surgical preference cards are surgeon/procedure-specific and store items needed for the procedure, as well as procedure-specific documentation templates and defined defaults. During scheduling, the surgical case number is automatically created, and the appropriate preference card is assigned based on the surgeon and procedure selected. Since the surgical items and documentation templates/defaults are included on the preference card, the case-specific pick list and needed documentation automatically pull into the case, where the nurse can edit/complete by exception.

2.1.6 CLINICAL DOCUMENTATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Clinical Documentation, pursuant to Section 1.6 (Scheduling Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

PowerChart is a family of system solutions for a wide assortment of health care providers designed to automate care delivery. As an electronic medical record system, PowerChart supports enterprise-wide viewing of clinical information. Cerner Millennium solutions create a single source of truth for the entire care delivery team providing real-time access to the same information regardless of role, venue or condition. As a result, we are able to support the full scope of practice for each clinician with automated protocols, optimize handoffs from clinician to clinician, venue to venue, as well as meet quality and regulatory requirements captured as a natural by-product of documentation. It includes process automation functions for viewing clinical information and activities from any department or system; ordering of nursing or multidisciplinary care team procedures; clinical documentation in forms-based, template, or free-text and structured-text approaches; and coordinated care pathways. In addition, entry of demographic and visit data can be made using a basic patient registration function. PowerChart and its related solutions can automate many tasks associated with providing optimal patient care. PowerChart automates the processes necessary to coordinate patient care and document at the point in which it was delivered in both acute inpatient and outpatient settings.

Our comprehensive documentation management solution is designed to automate discrete data documentation related to care delivery anywhere within a health system. This includes information obtained from the delivery of care documented in such forms as textual documents, vital signs,

assessments, height, and weight. Cerner provides a library of standard documentation forms, interactive views, notes, and templates which can be modified by your organization. As orders, results, and documentation are completed in the system, task lists and workflow views are updated appropriately. Our interdisciplinary workflow tool guides collaboration and provides clinicians a face-up view of critical patient information, patient status, and activity data with both a single patient and multi-patient context in order to proactively manage patient care. As a result, communication is enhanced, redundant charting is eliminated, pertinent results are integrated into documentation, charting standards are upheld, and quality of care is improved while errors are reduced.

Various methods of viewing results are available; the Patient List, Order details, the Chart Summary, the Message Center, the Electronic Medication Administration Record, flowsheets such as I&O, and clinical notes. The results viewing process is designed to provide the clinician with the most pertinent results first. The care provider then can seek additional results if necessary. New, as well as abnormal results can be defined to prompt clinicians and the appropriate task lists updated. Cerner Millennium can also integrate with mobile devices. Our solution is device agnostic based on virtualization capabilities. As long as the device is adequately configured for processor speed, memory requirements and screen resolution for example, you can run Cerner Millennium applications.

Health care is complex and demands multidimensional coordination, communication and collaboration across the care delivery team. Our system can support the charting, viewing, ordering, and care planning/pathway needs of the multiple specialties within your organization. You can define custom flowsheets, online forms, clinical note templates, plans, and pathways to meet the specific needs of the various specialties. The system provides the flexibility to completely customize your order catalog to accommodate all the areas or departments within your organization. Multiple views/screen formats can be customized for departments, units, providers, specialties, and more.

For example, the flowsheet allows clinicians of all specialties to efficiently review result data and documents from Cerner's integrated clinical systems as well as interfaced foreign systems within a single spreadsheet view as soon as they are recorded. A virtually unlimited number of online flowsheets can be designed for use in different specialty areas and can include any or all data or a select subset of the data captured. Flexible display features allow you to create an optimal view. You can select the format of the flowsheet interactively, maximizing the communications of information to the clinician as appropriate for a given clinician and patient.

The Cerner solution provides an online problem list, representing the patient's lifetime problems which are maintained across the network, and can include diagnoses, conditions, and anything that presents as a problem to the patient's overall health. Problems are codified and include the nature of the problem, its status, onset and duration. Database links to the associated clinical events provide detailed documentation of the basis and course of a specific problem. Problem list information is collected and entered into the system within the problem list view which can be embedded into documentation templates.

The Cerner solutions provide a wealth and variety of standard reports such as Active Orders, All Tasks, and I&O's to name a few. In addition, your organization can also define and build a virtually unlimited number of Discern Explorer reports to report on any discrete data captured in the Clinical Data Repository.

Cerner Millennium offers cross-discipline shared servers for registration, scheduling, ordering, results, documentation and charging that eliminates duplication, leverages processing power across the organization, and allows flexibility to meet the demands of departments. For example, charges can be dropped based upon order placement and documentation. Charge capture can occur at order

entry, collection, order completion, task completion, result entry, and at the result or observation level in documentation. You can easily retrieve online charge information through the Charge Viewer.

2.1.7 ORDER MANAGEMENT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Order Management, pursuant to Section 1.7 (Order Management Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner Millennium includes not only the Clinical Data Repository, but also the viewer into each patient's electronic medical record. Cerner's EMR includes familiar views containing functions such as the patient demographics view, growth chart view, Message Center, flowsheet, patient list, multipatient task list, and various summary and workflow views. By using additional Cerner Millennium solutions, corresponding views are added to the EMR viewer. For example, the addition of Power Note, order management, and documentation functionality adds views to support order entry, forms and notes documentation, and the MAR. Whether the clinician is in an inpatient or ambulatory venue, they simply click the view corresponding to the function they desire, or set default views. Furthermore, you can create meaningful views of information to support the vast needs of all types of roles, areas, and user level preferences. Much of our development efforts have focused on providing clinician views that support workflow processes. Summary screens, predefined views, flowsheets, patient lists, Message Center, orders, interactive view, structured documentation templates, pathways, problem list, clinical, documentation forms, clinical summary and task list are all examples of views that can be customized by area and/ or role to meet your needs. Flexible display features and a multitude of viewing and navigation preferences can be utilized to maximize the communication of information to the clinician, both as predefined views as well as interactively during real-time record viewing.

These multiple views/screen formats can be customized for departments, units, providers, and specialties. Your organization can determine which views are available to each clinician by position. If your organization wants to restrict clinician access, you can set that position security to not include those views. For example, clinical results views can be customized to display the most pertinent results first within various formats such as flowsheets, patient list, order details, chart summary, Message Center, MAR, I&O flowsheet, and clinical notes. These customized summary views and custom flowsheets can be defined to meet the needs of various workflows within your organization.

Cerner's orders management solution coordinates communication and order management across the continuum of care and across facilities and was tailored specifically with physician and clinicians workflow in mind. It forms the basis for Cerner's computerized provider order entry (CPOE) solution. Along with physicians, other care providers including nurses, clerks and other clinicians are able to support order entry, review, validation, interdepartmental communication, inquiry, and reporting of clinical orders.

Our order management solution addresses the needs of each of your clinical roles and can be utilized for patient ordering needs across all venues of care-Inpatient, Ambulatory-In Office, and Prescriptions. PowerOrders presents a view of the ordering process in a display similar to the Flowsheet and also handles medications, dose range checking, and continuous infusion orders. Order modifications are streamlined with an edit-on-the-line feature and patient allergies and diagnoses

can be accessed from the order window.

Providers can review, validate, inquire, and report on clinical orders based on security. It allows physicians and other clinicians to place new orders, suspend/resume orders, view existing orders, modify, review, renew, and cosign orders. Many convenient timesaving features are provided, including pre-built order sentences, favorite orders folders, and linked reference text. During the ordering conversation, the clinician has the ability to see relevant data from the repository within the order entry screen. The point and click ease of ordering and viewing enables providers to spend less time with the patient chart and more time providing care. Task lists and orders queues are updated real-time as new orders are posted and new results become available. They will be posted in the applicable views, worklists, and flowsheets.

Our CPOE solution ensures that information and alerts are available to all users at the appropriate time and in the appropriate venue. Information entered "downstream" (as well as information written to the patient's record from previous visits) is available to the departmental user, helping that user make the best and most-informed decisions possible. For example, the pharmacist can view clinical notes and laboratory results directly from the pharmacy system and in appropriate workflows.

Cerner's decision support solution, Discern Expert, can look across multiple workflow environments. Our rules engine can interact with orders, documentation, pharmacy, laboratory, radiology, surgery, cardiology, registration, scheduling and other ancillary environments. Cerner's decision support tools are not limited by patient type. Data can be evaluated across encounters including inpatient, outpatient, and any of your facilities or locations providing clinicians with feedback inside and outside of the ordering process.

During installation, orderables are entered into the build spreadsheet and imported. Also, a standard order catalog is provided by Cerner and can be uploaded to your system. With Order Catalog Tool, you can add new orderables, modify existing orderables, and make batch changes to sets of orderables. To speed the process, you can copy the parameters for a previously defined orderable into a new orderable and then make necessary changes. Your organization can use the tools to tailor a virtually unlimited amount of orders to meet the needs of all clinical settings within your organization.

2.1.8 CLINICAL DECISION SUPPORT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Clinical Decision Support, pursuant to Section 1.8 (Clinical Decision Support Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner Millennium solutions feature clinical decision support throughout the continuum of care. With our knowledge solutions we provide the most current and relevant medical decision support, which is embedded in the actual workflow of providers and clinicians from the very first assessment, placing content-based on the latest clinical evidence, empirical data, and optimal practices at the clinician's fingertips at the appropriate time and place in the care process.

Alerts, reminders, and other decisions are built into each Cerner solution where they make the most sense, such as duplicate order checking, abnormal results indicators, immunization reminders, or auto verification, to name a few. Utilizing Discern Expert, specific patient parameters and events can

trigger and fire notifications which can prompt clinicians with guidance and/or to enable intervention. In addition, your organization can use Discern Expert to easily write additional rules to meet your needs.

Consult orders can allow a clinician to place an order and direct it to a specific medical service. Clinicians associated with that medical service can view the list of consult and accept if applicable. In addition, clinicians have the ability to forward results and documents to support consult request to clinicians. These requests appear in the Message Center.

Our clients have also used our solutions to improve the quality of care, costs and lives of the rapidly growing number of individuals with chronic illnesses. As such, our solutions include condition summary screens, which present the user with contextual summaries and evidence-based treatment algorithms based on the patient's condition. Our solutions also provide population and provider performance reports that aggregate performance metrics. These measures help physicians compare and improve their individual clinical performance against standardized performance targets and peers' performance. We are helping our clients improve care for these patients by drawing on the information doctors and nurses put into the EMR and comparing the care provided against quality measures from nationally recognized organizations such as the National Center for Quality Assurance.

Advisors (interactive reports) have been developed for VAP, BSI, UTI, and SSI. Much of the content on these advisors are extracted from the Cerner Millennium platform and follow the algorithms as defined by the CDC and NHSN. Infection Control has four Advisors which follow CDC and NHSN guidelines for Urinary tract infections, Blood stream (Central Line) infections, Pneumonia (VAP), and Surgical Site infections. Advisors help guide the clinician by extracting objective data from Cerner Millennium and allow the end user to fill in the subjective data to arrive at a final conclusion. Once completed, the clinical data documented within the Advisor can be saved as a CSV file for upload to agencies such as NHSN.

With our Core Measures solutions, data elements that can be discretely identified within your system will populate based on normal, everyday workflow, eliminating redundant documentation. Outcome measures are then available in real-time at the patient level, within the Quality Measures PowerPlan, or at the population level, within the Quality Measures MPage. Our solutions offer Web-based reporting screens and summary reports within an intuitive graphical interface. Additionally, content and reporting packages are updated in alignment with the CMS/TJC and Meaningful Use versions as mandated by the individual reporting programs.

2.1.9 PHARMACY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Pharmacy, pursuant to Section 1.9 (Pharmacy Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's Clinical Data Repository (CDR) contains patient demographic and clinical data in a single, consolidated longitudinal electronic medical record. In our PharmNet Inpatient Pharmacy solution, lab values are available automatically in the results tab with integration to our lab solution, or via an HL7 interface to a foreign lab system. You can define how lab values show by flagging them in different colors, or by letters H, L or C (High, Low, or Critical), or both.

Our pharmacy solution stores all medication history from previous encounters, which can be viewed

via a history action. The clinical documentation feature provides for more thorough and complete documentation of clinical notes, task lists, and activities within the pharmacy department. The medication profile is updated real time with medication orders captured by history on admission, as well as outpatient prescriptions and inpatient orders. The medication history is viewable at any point by all authorized users. Our pharmacy solution supports TallMan lettering for look alike, sound alike drugs, using MediSource which has certain medications recommended for TallMan. Dose range checking content is provided by MediSource, and can be customized to meet your unique practice standards. Customization supports adjusting the safe minimum and maximum dosage range at the specific generic drug, age and route of administration context. Cumulative Lifetime dose range checking provides system-automated verification that the dose you are ordering will not result in the patient receiving excessive amounts of meds. Cumulative dosing is calculated based on dispensed doses from PharmNet, documented medication administration from Cerner's electronic medical record, or documented therapy received outside of the Cerner system. Pharmacists have full access to documentation of allergies, which can be viewed in all Cerner Millennium solutions. PharmNet supports allergy checking and notices. When appropriate, a system-generated alert will display on the user screen during order entry. Hard and soft stops built at the orderable level present clinicians with visual notification in our orders solution that the order is reaching its stop date/time. If a hard stop order is not renewed prior to its stop date/time, the order is discontinued. A soft stop continues past its stop date/time. Controlled substances are included in the formulary. There are multiple standard management reports that offer reporting of user-defined parameters to provide data including medication utilization. Also, Discern Analytics reports allow you to create ad hoc reports for medication utilization.

PharmNet's order entry determines if another user is accessing the medication profile. If not, you are granted the record lock when the patient is selected. This is not an order specific lock, as any other orders, if changed, can have a negative clinical impact on the order being acted upon without the clinician's knowledge. In the clinical data repository, you can perform other actions in the chart and place orders for other catalog types. If you initiate an order while the profile is locked by the pharmacy user, you receive a warning and, based on preference, can proceed. If physicians have initiated medications orders, they are granted the medication lock until signed. The pharmacist, upon selection of a patient which is locked, is notified medication orders are being added by another user. The message indicates who the other user is, and the remaining time on a client defined lock expiration setting. Pharmacists can inquire on any details without affecting the lock, or based on security, break the lock to begin entering orders. Pharmacy order entry locks when the patient is selected and releases the lock when leaving the patient record as the workflow in MedManager is related to medications. The clinical data repository does not lock the patient until a medication order is initiated, at which time the lock is attempted to be acquired.

IV charting is provided with the our eMAR. Multiple ingredient IVs are available. TPNs are built as order sets and can be loaded in PharmNet after calculations are done. Our pharmacy solution supports performing an IV compatibility check of the ingredients being added into the same multi-ingredient IV order at the time or order entry. IV compatibility checking is performed as part of the clinical checking and decision support process using King's content. Checking is done on drug/drug and drug/diluents pairs. Interaction information is displayed, along with other reference information pertinent to the medication and administration. Order changes are reflected on the eMAR and activities list in real time. Patient medication leaflets are provided with our MediSource database. You can enter orders as a template non-formulary item, which allows you to free text any item in.

For a medication orderable synonym, you can select a specific Rx mask based on options defined for

the synonym in Order Catalog Tool. Selection of an Rx mask defines its medication type and prevents the front-end application from prompting for this information later. Virtual View settings determine which synonyms are visible in order management. Via Virtual View, Tylenol, for example, can be visible in Facility A, but not Facility B.

Your organization defines when in the life of the order a charge is posted. You can generate a charge on order, and credit the charge if the order is canceled. Charges can be captured upon medication dispense or medication administration.

The medication list contains a patient's current and past med orders. Using headings, columns, symbols, and brief descriptions, the medication profile provides a quick, in-line summary of essential information about each order. The medication list view is divided into three categories, each of which is identified by a heading: pending, medications being given, and prescriptions/home medications. The latter two categories are divided into current and past subcategories. Arranged in a tree format, each category and subcategory can be expanded or collapsed, allowing you to see order details as needed. The orders view is used to place new orders, view existing orders, renew, modify, review, cosign orders and generally work with various types of orders, such as sliding scale orders, weight based orders, medication orders and more. The three main sections of the orders view are the Navigator, the Order Profile, the Order History and Medication Reconciliation area. Our orders solution provides robust medical student order entry functionality. Prior to placing any order, the medical student is prompted to enter a physician's name (who receives the prompt to sign the orders). The orders can then be held in the solution until the physician co-signs the orders. These orders can be seen in the orders profile view as "held pending signature". The orders are automatically routed to the "signing" physician's message center/review queue. Once the orders are signed, they are automatically processed.

Dose calculator functionality and dose range checking provide a safe and effective check for dosing medications. Comments can be defined and presented during an under or overdose alert message. Cerner supports dose range checking based on age, weight, body surface area, and renal function. Dose range checking functionality, validates single dose, daily dose, therapy limit dosing, continuous infusion additive-rate checking, renal dysfunction checking and lifetime burden checking for medications with a literature published lifetime burden. Also, dose range checking parameters include gestational age-based dose range checking, hepatic dysfunction and problem/diagnosis dose range checking. Discern Expert rules validate that patients have a height, weight or allergies entered. The most recent values for height, weight, and serum creatinine are viewable from the order profile, and are used by the system for dose range checking, dose calculations, and calculation of BSA, IBW and CRCL values. Result date, time, and method of calculation are available. Dose range checking supports renal checking against Creatinine Clearance estimated from a Serum Creatinine result. When ordering renally excreted, or nephrotoxic medication for a patient with a recent creatinine result that indicates impaired renal function, a dosage adjustment is recommended. An alert evokes when a renally excreted drug is ordered. Recent lab results are checked for low creatinine clearance levels. This rule is done assuming capturing height in centimeters. The Cockroft/Gault formula is used for patients between the ages of 18 and 92 years, and the Schwartz formula is used for patients between 6 months and 20 years of age. Our pharmacy and rules catalog provides Standard IV/PO WBC Switch. This rule recommends a switch from an expensive IV medication to a more cost effective oral equivalent. Documents such as facesheets, labels, and wristbands can be produced at admission and can include barcoding. Please refer to the Additional Reference Materials section for examples of barcodes.

2.1.10 MEDICATION ADMINISTRATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Medication Administration, pursuant to Section 1.10 (Medication Administration Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner Millennium Medication Reconciliation supports identifying the most accurate list of all medications that a patient is taking - including the name, dosage, frequency, and route- and using this list to provide correct medications for patients anywhere in the health care system. Our reconciliation process involves comparing the patient's current list of medications against the physician's admission, transfer, and or discharge orders. During each transition from one venue to another, clinicians should review previous medication orders alongside new orders and plans for care, and reconcile any differences.

Central to the reconciliation process we provide a single source of up-to-date medications with all necessary order details. An efficient process is also very important. Our tools support reconciliation of current medications and addition of new medication orders within the same screen or user interface. Cerner Millennium supports the medication reconciliation process for all transition types during an encounter; admission, transfer or discharge.

Cerner's medication reconciliation is an enhanced way for physicians and clinicians to document patient medication history and reconciliation. The components include documented medications by history, admission, transfer and discharge medication reconciliation. We provide prescription actions such as convert to inpatient and convert to prescription within the reconciliation window as well as a view of therapeutic alternative selection. Specific functionality includes the ability to:

- Receive automatic notifications (through tasks) when patients' medication histories have not been completed.
- See when and by whom a patient's medication history was last updated for a given encounter and view when a patient's medication history has not been completed for a given encounter from the order profile's medication list.
- Define whether a patient's medication history is considered complete, including active and inactive medications based on documented medications and their respective compliance.
- Document when there are no changes to a patient's medication history and compliance
- Reconcile medications upon admission, transfer, and discharge of patients
- Add orders for medication reconciliation
- Select therapeutic alternatives
- Convert medications to inpatient administration orders (active or inactive)
- Convert inpatient medications to prescription orders (active or inactive)
- Add and search for Care Plans

Our orders display in the reconciliation process with the order status such as ordered, suspended, incomplete, cancelled, discontinued, completed, pending complete, voided with results, and cancelled to easily recognize if the medication needs to be continued upon transfer or discharge.

2.1.11 LABORATORY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Laboratory, pursuant to Section 1.11 (Laboratory Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

The major components of the PathNet product line address the clinical information needs of the various laboratory sections and include General Laboratory, Microbiology, Blood Bank Transfusion, Anatomic Pathology, HLA and Outreach Services. Since its market introduction, PathNet has attained significant success in the marketplace, and is recognized as the industry's leading LIS. Based on its robust functionality, PathNet provides benefits for integrated health organizations as well as clinics, commercial laboratories, and hospital groups worldwide.

Our clinical solutions continue to evolve with focus on workflow and ease of use functionality, and identified laboratory business process models. The Cerner PathNet laboratory information system offers clinicians comprehensive, fully integrated technology to automate the operational and managerial sides of the laboratory, and because the PathNet family of solutions operates on the unified Cerner Millennium architecture, information links seamlessly with the patient's electronic medical record.

Clinical and laboratory data can be charted in our solutions. With our single data structure, Cerner Millennium provides real-time access to all charted information across multiple applications, such as laboratory, pharmacy, nursing and physicians, to all of those needing such access, regardless of location.

All results are associated to the order set. For example, a CBC can have results for hemoglobin, hematocrit, wbc, rbc, and more. All of these results can be associated to the one order (CBC).

Microbiology results display within Cerner's micro viewer, which includes a susceptibilities grid format view of the organism and related drug susceptibilities. Depending on the types of tests performed by the lab, the results are listed in columns. The result indicators can be defined by your organization. Some examples include these common symbols: R = Resistant, S = Susceptible, and I = Intermediate.

Your organization can define rules that can trigger an order based off of the positive result.

2.1.12 RADIOLOGY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Radiology, pursuant to Section 1.12 (Radiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 2 pages.

Cerner's RIS system, RadNet, streamlines departmental operations, such as registration, order entry, patient tracking, film tracking, transcription, electronic signatures and report distribution. Pertinent data, such as allergy information or lab values, is available to radiology staff at the click of a mouse. In addition, RadNet provides unparalleled efficiency in exam scheduling and ICD correlation, as well as tools to streamline documentation, optimizing revenues and profitability. Our integrated solutions provide the ability to work with multiple modalities and worklist to enhance the workflow of the technician as well as the provider. We support the work flows as mentioned, CAT SCAN; Ultrasound; Nuclear Medicine; General Radiology; Mammography; Cardiology; and MRI. The scheduling

capabilities include reason for exam as well as cancellation with reason and the ability to schedule/reschedule multiple resources, and exams in the appropriate order and time span. Orders can include reference text as well as links to your specific reference sites. In addition, we support technical comments and the ability to capture that section on reports as well as in our chart search capabilities. Provided adverse reactions are documented in our allergy and adverse reaction module, our system can check radiology orders against the recorded information as well as perform MediSource interaction checking. Your radiology staff can access the allergy/Adverse Reaction module to view, edit , and add reactions depending on assigned security. All medications ordered in the radiology module can appear on the MAR and be documented as administered on the MAR. Our integrated orders provide one source of truth for placing all orders, interaction checking, and integration with the MAR.

Technical comments is an open-ended data collection online form that allows you to define what data is collected and provides control over the formatting of the data. Data entered can be included within the exam report.

Reports providing volume, utilization, and performance statistics are available to department managers to assist in planning and management of the radiology department. These reports provide the means of evaluating the performance statistics within and across the entities of the organization, such as institution, department, and section-level comparisons.

The following is a list of reports you can create easily using the inherent Discern Analytics tool.

Actual turnaround time log, Turnaround time report, Exam activity report, Order activity report, Detail activity report, Transcriptionist activity report, Procedure classification report, Repeat analysis report, Medication documentation report, Technical comments report, Mammography report, Workload report, Canceled Exam Report, Wet Read Report, Peer Review Report

The trending functionality within our reporting tool, allows long or short-term trends to be easily identified and analyzed. Discern Analytics also includes the ability to graph statistical information into numerous graphing styles allowing for quick analysis of volume and turnaround time information. You can save these reports for future use.

In the area of patient outcomes, radiology usually contributes data to a health system-wide plan for evaluating outcomes. Cerner's radiology solution offers mammography statistical reports that give outcome statistics by radiologist, and patient age group. The standard indicators are true/false positive/negatives, accuracy, sensitivity, and specificity.

Mammography management is an integral part of the RadNet solution that prevents patients from being lost to follow up, as well as ensuring the specific data collection requirements are met. Follow-up case records are created in RadNet each time a technologist completes a mammography procedure. This eliminates interfaces or dual maintenance of separate databases that can lead to delayed results or lost cases. Data collection can be performed at the time the procedure is completed, at the time of transcription, and at electronic signature by the radiologist. Historical patient medical information is transferred from one visit to the next to eliminate re-entry. Online breast diagram is available to record annotations and study-specific markings. The technologist only needs to enter the information that has changed since the patient's last visit. RadNet's Mammography application provides for patient notification and follow up, medical outcome reporting and Discern Analytics reporting for all BI-RAD codes as well as any client-defined data elements. Overall Breast Composition information and all Required MQSA data exists in the Study tab of the Mammography Case Maintenance window.

When a patient returns for follow-up exams, the system creates a new follow-up period. Data

exchange is transparent across every institution in a multi-facility setting. Access to all previous results and statistical fields is available to the technologist, transcriptionist, and radiologist.

Number of biopsies recommended, number of biopsies performed, number of cancers found, biopsy yield of malignancy, and cancer detection rate are all statistical report fields that can be reported by individual radiologist, all radiologists, and patient age group.

The following reports are available with mammography management:

Follow-up reports, Assessment by patient age group report, Recommendation by patient age group report, Outcome summary report, Summary report by radiologist report, Follow up reports, Assignment based on Pathology Information, Standard Management Report

The Cerner RIS provides for the scheduling of patients, exam rooms, and equipment, as well as the personnel needed to perform the exam. The scheduling system provides interaction or conflict checking, and procedure sequencing to ensure that all procedures are performed in a safe manner. Online inquiries and reports are provided by department, section, exam room, procedure, and patient

Each appointment type can have a procedure code associated, based on database build. The charges would be generated based on the procedure code associated to the appointment type. The same can also be accomplished via a generic appointment type with orders, the user manually selects the order specific to the need, screening versus actual treatment, as determined by the diagnosis.

Scheduling security allows you to associate specific personnel into groups that have defined privileges concerning what actions can be taken within the appointment book. Scheduling security can also determine override capabilities.

Patient Schedule Inquiry can be restricted to a particular scheduled resource or group of scheduled resources, or you can inquire about all appointments for a patient. For those with scheduling security, Patient Schedule Inquiry can be used to schedule, reschedule, cancel, hold for rescheduling, or modify appointments.

For viewing PACS images with the Rad report an exchange of information between Cerner's radiology solution and the PACS via an interface conforms to HL7 standards. A Cerner integrated solution seamlessly displays information for the order, person history, study history, reports and images within the technicians and physicians workflow.

2.1.13 OPERATING ROOM REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for the Operating Room, pursuant to Section 1.13 (Radiology Room Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's perioperative solution addresses the complex needs of the surgical service by providing a point-of-care, patient-focused solution that encompasses the surgical and anesthesia records, and integrates clinical patient information throughout the perioperative encounter. You can schedule and document multiple surgical procedures within a single case. Resources needed for the case are checked for conflicts during scheduling and can include surgeons, anesthesia providers, rooms, the patient, and schedulable equipment. You can also assign surgical personnel to rooms or cases.

Preference cards consist of pick list items, multiple comment fields, and documentation. These

preference cards can be generic procedure-based, or surgeon and procedure specific. Our user-friendly preference card wizard helps you build general procedure and surgeon-specific preference cards. The wizard assists you in creating preference card pick lists, procedure-specific documentation forms, procedure comments, and surgeon comments. You can create general procedure-level preference cards as a template for building surgeon-specific cards. If your current system contains up-to-date preference cards that can be extracted, we also provide an upload utility that can be used to create your preference card pick lists and comments. Your organization is responsible for the extraction of data from the historical system. Cerner will provide support to populate the extracted data into standard Cerner Upload Templates in order to facilitate a successful upload.

Unique to Cerner, the configuration of documentation on the preference card filters procedure-relevant fields to the clinician for documentation, thereby streamlining the charting process. Structured data, maintained on the preference card, automatically defaults to the patient's documentation when appropriate, allowing for documentation by exception.

When a case is scheduled, the correct preference card(s) is automatically associated with the surgical case based on the procedure(s) scheduled. At a predetermined point in time prior to the day of surgery, the solution automatically generates patient-specific case pick lists from the associated preference cards. These case pick lists automatically pull into case documentation, where you can document by exception and perform any patient-specific modification for materials used during the case.

We provide flexible, focused, forms-based data collection to support your perioperative documentation needs. Our starter set of documentation includes standard case information, case times, case attendees, surgical procedures, delays, counts, prosthetic devices, patient positioning, skin prep, intake/output, transport, laser data, and many others. If needed, your organization can also create forms and fields to fulfill additional specific requirements. Information obtained at the time of scheduling or available from the preference card defaults to the intraoperative record wherever possible, reducing redundant data entry, while simplifying and speeding the documentation process. All case attendees and times are easily recorded within the perioperative record. Charging is accomplished as a by-product of case documentation and supplies used. The tiering logic in Cerner's charge capture solution contains the rules that bill items pass through in order to attach prices and bill codes.

2.1.14 INTENSIVE CARE UNIT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Intensive Care Unit (ICU), pursuant to Section 1.14 (Intensive Care Unit Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Our Critical Care solution provides a complete workflow and documentation solution for the entire team including physicians. With CareAware iBus, we provide a true plug-and-play device connectivity into the electronic health record, including patient beds, vital signs monitors, ventilators, anesthesia machines, infusion pumps, and more. Our interactive flowsheets provide the ability to perform prebuilt simple to complex calculations, store the results as discrete data, and create line graphs using numeric data. In addition, the clinicians can use our clinical calculator accessible from the menu. Our Intake & Output flowsheet shows the entire intake and output information available on

a particular patient divided into time ranges that display subtotals as well as display the balance. Our I&O flowsheet can display in chronological and reverse chronological order.

Patient information drives the delivery of care with alerts, prompts and embedded knowledge all focused on the data entered and received about the patient. Diagnoses and medical problems prompt for specific plans of care; vital signs, height, weight, and lab results drive order selection and prompts for appropriate documentation. Our structured enterprisewide repository, of all clinical information, can originate from numerous sources, such as various labs, and is maintained in an easily accessible, standardized format. You can create views grouping the stored data as desired to record and/or view the continuum of care. Our advanced graphing capabilities support the creation of graphs that can display results from intake and output measurements, bedside medical devices, numeric lab results, assessments, and medication dosages such as vasoactive agents. Our graphing supports comparative data using multiple y- axis lines and unique point indicators. Multiple data items in a graph can be viewed together for identification of trends, copy paste into progress notes, and print on demand.

Our system can integrate with bed side point of care equipment providing immediate results. Our point of care solution supports verification of the correct patient, medication, dose, route, and date/time.

2.1.15 REHABILITATION REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Rehabilitation, pursuant to Section 1.15 (Rehabilitation Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Clinical Data Repository is the foundation for a multitude of Cerner point-of-care-specific solutions, including those for home care, physician offices, clinics, acute patient care, critical care, and long-term and rehabilitation services.

For example, we offer Executable Knowledge for both inpatient and outpatient rehabilitation care. Executable Knowledge for Inpatient Rehabilitation is Cerner's interdisciplinary care documentation solution for the adult and pediatric patient population. The content enabling this solution meets the requirements of submission of Inpatient Rehabilitation-Patient Assessment Instrument (IRF-PAI) data to CMS. We developed this content through a partnership with the Rehabilitation Institute of Chicago (RIC). Our Rehabilitation content provides a number of PowerForms, PowerNotes, PowerPlans, and Patient Care Summary Views, as well as an IRF -PAI Data report. Executable Knowledge for Rehabilitation supports the following services, Physical therapy, Occupational therapy, Speech language pathology, Care management, Physician workflow for orders and documentation, and clinician workflow. Furthermore, our outpatient rehabilitation content also supports the following disciplines: vocational, wheelchair and seating, and psychology.

With our rehabilitation content and work flows IRF-PAI data points are collected as a bi-product of documentation and includes built-in reference and interpretations to assure accurate documentation and calculation of the scores for admission and discharge and creates a .csv file with the scores that can be sent to CMS or a third party system for submission.

Charges are captured at the point of care for timely and accurate billing. Our Interdisciplinary documentation includes team conferences, discharge documentation, and interdisciplinary care plans. Team conference documentation is easily completed and pre-populated from previously

documented information. Current and previously documented information auto populates notes and forms for accurate and rapid completion of documentation. Staff and clinicians have easy and direct access to reference text built in various sections within the system for published definitions and standardized procedures. Our content includes many forms and notes specific to rehabilitation including the documentation and calculation of functional independence measures scoring. The form uses branching logic to arrive at the scores for OT, PT, SLP, and Nursing.

For internal physician approvals, the order/requisition can route to specific inboxes in our message center. The provider can approve the request on a specific form or note and resend the approval to the requesting provider/department inboxes. For external physician approvals (external to our system), the order or requisition can print to selected fax devices. The approver can mail or fax the completed form back to the organization. With our Scanning solution, the scanned document can become a permanent part of the medical record and attach to the patient's electronic medical record and the specific rehabilitation encounter. Cerner offers a scanning solution, Document Imaging, but is has not been proposed at this time. Because sizing can vary significantly among clients depending on their existing page volume and/or transition strategy to an EMR, we will need additional information to provide you an accurate cost proposal and transition strategy.

2.1.16 ENTERPRISE MASTER PATIENT INDEX (EMPI) REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Enterprise Master Patient Index, pursuant to Section 1.16 (Enterprise Master Patient Index (EMPI) Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's registration and EMPI solutions generate an EMPI number in real-time. Cerner's EMPI solution provides the ability to correlate identifiers from multiple contributors using advanced matching algorithms. The data model stores all person identifiers coming from all contributing sources.

The Combine Tool is used to eliminate duplicate records by combining persons and encounters in the database. You can separate person and encounter records that were combined in error, or move a single encounter from one record to another. An online work queue includes a percent column that reflects the probability of a match. A safety mechanism exists to prevent accidental combining of encounters for two different persons. Cerner's EMPI provides additional probabilistic suggest logic to the search process and scripts/reporting mechanisms used to identify duplicate records. This logic recommends persons for potential combination due to errors in the key data fields or name changes. Recommendations are assigned linkage proximity, (confidence levels) through the use of SOUNDEX and NYSIIS phonetic encoding of first and last names, nickname pools, birth date range qualifiers, and transposition fuzzy logic. User-defined weight tables can be used to calculate the confidence levels. Duplicate record creation is prevented with the initial search of the database for a person or encounter. Depending upon match criteria defined, the search returns potential matches to the person/encounter entered. Auto-combine capabilities and potential match reports are also provided.

The Phonetic Search option, an advanced search algorithm, includes the ability to perform inexact matching of the data provided from the Cerner Millennium common person search through all Cerner Millennium applications, passively through the inbound ADT interface match and reconcile processes. Errors such as misspellings, complex transpositions, name swapping, extra characters, and

missing characters are all taken into consideration. Thresholds for reconciliation of records or posting to the manual queue can be set by contributor system or a general default.

Passive implementation involves the behind the scenes interfacing in both a real-time and batch interface mode. It contains logic to match on local identifiers and reconcile persons across the enterprise. Probabilistic suggest logic can also be implemented. This is reactive, catching duplicates and exceptions after the registration process is complete.

Eligibility verification allows for a transaction to be sent to registration. Cerner supports clearinghouses/payors that are HIPAA compliant using the ANSI 4010/5010 270/271 transaction set or ANSI 5010 270/71 transaction set. The eligibility request is launched on demand via manual intervention. The response returns to your screen and displays the information retrieved from the clearinghouse/payor. Discrete data elements are posted at the person encounter level. The number of insurance company profiles is unlimited.

Cerner supports the Medical Home/Accountable Care Organization with our integrated, patient-centric, evidence-based solutions designed to enhance the workflow of the provider, improving the ability to provide optimal, safe health care. All information, from the first encounter to the last, resides in our longitudinal relational database. As clinicians, staff, and providers collect information, it becomes a permanent part of the patient‘s medical record and is immediately available to other care providers. We provide clinicians with the necessary, most current and relevant medical decision support at the point of care in views that fit clinician workflows. Components include:

*Health Maintenance: Provides prompts around health maintenance needs and provides a proactive approach for assessing patient needs through the year, based on the patient‘s age, procedure, diagnosis, gender, or documented problem.

*Chronic Condition Management: Includes contextual summaries and evidence-based treatment. Population and provider performance reports aggregate performance metrics, permitting physicians to compare and improve their individual clinical performances against standardized performance targets and peer performance.

Our package of solutions enhances the quality of care, decreases costs, and improves overall patient outcomes. Cerner systems provide you with the means to manage your community‘s health care requirements more effectively, efficiently, and transparently than ever.

2.1.17 HEALTH INFORMATION MANAGEMENT (HIM) REQUIREMENTS

Provide Proposer’s overall summary description of how its proposed EHR System meets the needs of DHS for Health Information Management, pursuant to Section 1.17 (Health Information Management (HIM) Requirements) of Appendix H (Functional Requirements). Proposer’s response for this Section is limited to 1 page.

Cerner’s HIM solution focuses on attaining increased productivity and operational management in the medical records department, whether addressing health information needs locally or across your health care organization. Cerner Millennium's single architecture provides an integrated set of functionality committed to benefiting your organization by eliminating redundant data entry and minimizing manual activities, including task management, chart tracking, deficiency analysis, and comprehensive reporting.

Cerner’s HIM solution’s patient deficiency analysis and physician deficiency analysis application

manages the life cycle of the documents needing chart completion, including chart aging, management assignments, tag color, deficiency slips and pull lists. All types of documents can be managed regardless if they are in paper, electronic or scanned format. You can generate form letters notifying health care providers of deficiencies. Your organization designs the content of the letter and enters the qualifying parameters for its recipients. Notification of document deficiencies can be sent to the clinician's inbox and can be automatically completed through recognition of electronic document capture and signature events within PowerChart.

A variety of ways that deficiencies are assigned is provided. Your system administrator defines the time ranges for the chart and document ages that constitute deficiencies, delinquencies, and suspension.

Cerner's HIM solution's chart tracking application is used to manage the paper chart. Chart tracking provides you with the tools to manage the movement of patient chart media throughout your organization. You can create new chart volumes using a system of filing by patient chart, as well as by unit record. You can perform an inquiry to locate a specific chart volume, or record the movement of a group of charts from one location to another. You can select a patient and view the patient's visits with a list of each visit's corresponding chart media, or you can select a location and view a list of all the chart media from various patients currently at the location.

With the chart abstracting application provided in Cerner's HIM solution, you are provided with a wizard tool that allows you to determine what data elements to collect as well as a forms tool that allows you to design the form on which the data elements are captured. There is no limit to the number of user-defined fields allowed. You can identify timeframes for capturing data elements. Additionally, you can define which fields are required and which are optional.

With the chart coding application provided in Cerner's HIM solution, diagnosis, grouper, procedure codes and related information for a patient visit is captured. Chart Coding is integrated with Cerner's Encoder/Grouper powered by OptumInsight. Chart coding provides the basis for initiating the concurrent coding process by having coders select from working diagnoses and procedures identified and passed in from other Cerner solutions. Additionally, Cerner's HIM solution can be interfaced to a third party encoder.

Cerner's HIM solution provides a release of information (ROI) application that is used to manage your ROI process. Our ROI features include the ability to notate received requests, validate the authorization for the release of information, provide historical documentation of the information released, and support for the management of any associated reimbursement receivables. ROI has the ability to track both paper based and electronic documents that have been requested and mailed and allows for specification for which requests apply to accounting of disclosures. Tracking/reporting can be applied to all requests or just those applicable to accounting of disclosure reporting.

Cerner does not offer a transcription solution. Cerner supports a bidirectional transcription interface between the Cerner system and a foreign transcription system.

2.1.18 EMERGENCY DEPARTMENT REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Emergency Department, pursuant to Section 1.18 (Emergency Department Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Emergency Department solution creates an environment of readily accessible information that allows you to track patients and events in your Emergency Department in a timely fashion, particularly during peak flow periods. In designing your system, you can define any number of Emergency Departments and/or number of areas within an Emergency Department.

Our tracking board provides a detailed view of all emergency patients and can include information such as acuity, length of stay, assigned providers, patient location, results generated by ancillary departments, and other information.

With our quick registration, you can immediately begin patient assessment and treatment. For patients who are en route to your facility, our pre-arrival functionality allows you to document patient information without having to create an encounter. This includes information such as name, gender, reason for visit, DOB, age, pre-arrival mode, estimated arrival, and primary care physician. The patient name, gender, and reason for visit populate the tracking board. You can use free text to collect additional information such as vital signs and required orders/protocols. When the patient arrives, you can easily attach the pre-arrival documentation to the patient encounter during registration.

For trauma situations or mass casualties, you can define a quick registration screen that allows the triage nurse to enter multiple patients into the solution and display them on the electronic tracking board immediately so that care is not delayed. Our solution has a virtually unlimited capacity for the number of patients received and allows you to add beds, stretchers, and chairs to the tracking screen on the fly.

Our Emergency Department nursing documentation includes assessment forms, flowsheets, orders, results viewing, medication administration charting, intake and output worksheets, immunization records, clinical notes, data captured from bedside medical devices, and other documentation formats to support your needs. Clinicians can quickly access the patient's history, such as diagnoses, orders, results, documentation, and disposition. Ready access to the complete patient chart and streamlined communications help decrease length of stay and time to diagnosis.

Our Emergency Department physician documentation addresses more than 700 age- and gender-specific presenting problems. Template documentation enables clinicians to address multiple patient complaints while omitting redundant questions. Previously documented information can pull forward into current documentation if desired. For example, you can pull allergies, past medical history, previous medications, into the current visit. Charting is simple, quick, and customizable.

Our solution provides access to current visit information as well as the complete patient history. With the Cerner Millennium architecture, all patient data is stored within a single electronic medical record and is available to all clinicians with the appropriate security. Because Cerner Millennium solutions share a single database, transfer of patients is simplified.

2.1.19 CARDIOLOGY REQUIREMENTS

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Cardiology Department, pursuant to Section 1.19 (Cardiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

With the interfacing capabilities built into the Cerner Millennium architecture, Cerner can help you make your cardiology processes smarter, greatly improving care and managing costs.

Major Features of our Cardiology system include:

- Multi resource scheduling
- Clinical documentation
- Physician documentation
- Template driven procedure reports
- Management reporting
- Inventory management
- Order management
- Charge capturing/generation
- Image management
- Electronic medical record
- FSI interfacing
- MDI interfacing
- National registry certification

Cerner's cardiology system is a knowledge system that enhances outcomes measurement. As data is gathered from multiple departments, the Cerner system transforms this data into knowledge, which is used to give the user informed suggestions and report summaries.

Cerner provides a variety of data entry options. Data may be captured discretely in forms via multiple field options such as numeric, grids, pick lists, combo boxes, alpha responses (single select, multi-select), date/time, yes/no, and so on. A free text field can be built into any form to allow capture of free text information within the form. An unlimited number of templates can be defined by your organization within Clinical Notes. Clinical Notes are free text notes, and Smart Templates allow data to be pulled from the clinical data repository into the note. Documentation on custom flowsheets is also supported, in which data may be captured discretely or as free text. We offer cardiology specific templates that include a coronary arteries graphic to assist with documentation of artery occlusions and collateral circulation.

The Cerner system provides multiple options to support notification of clinicians of results within PowerChart. Rules can be defined to send defined providers a message to a pager, inbox, email or printer based on a test results. Test results can be viewed in the flowsheet. Clinicians can also view all new results in a new results folder of the inbox.

2.1.20 MANAGED CARE REQUIREMENTS (OPTIONAL)

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for Managed Care, pursuant to Section 1.20 (Managed Care Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Benefit Administration Services provides the foundation for a robust health plan benefit administration service for members of the employer's health plan. Plan contracts are managed through Benefits Management solution; maintains terms and conditions of relationships; manages information related to insurance plans, member demographics, EDI eligibility verification, detailed coverage and benefit information, referral and authorization management, initiation and storage of

Electronic Data Interchange related to the health plan. EDI transactions are sent via clearinghouse for eligibility verification; status of verification is displayed and stored. History, audit, and reporting tools are available. Information about members is stored and linked to a community-based provider directory and non-network providers for analysis of physician panels.

Cerner's Eligibility and Benefits Verification Service with Registration provide; current eligibility verification functionality, support third-party clearinghouse or individual payor that is HIPAA compliant using ANSI 4010/5010 270/271 or ANSI 5010 270/71 transaction set. Eligibility request can launch on demand, response returns in a window format and displays the information and can print the response. Returned information posts discrete data elements at the person encounter level. Registration initiates an eligibility request using a proprietary structure with a web service and is converted to an X12(ASC) 270 Eligibility Request (covered HIPAA transaction) before routed to payors. Cerner has connectivity to over 700 payors/health plans through three major healthcare clearinghouses. Cerner's Eligibility & Benefits Verification Service offers enhanced EDI including transaction caching, cascading searches, alter request by add service types, and filter response by limiting service types.

Cerner's medical administration functions comprise a care coordination/management approach and includes utilization management, case management, disease/health/condition management components. Disease Management is patient centric including health management across venues and encounters within Cerner including; Health Maintenance, Condition management, Readmission prevention, Care management. Care Management translates clinical and financial data to improve performance, care coordination, efficiency, and outcomes. Included in Care Management; Utilization Management, Discharge Case Management, Denial Avoidance Management, Document Integrity/Quality and a natural language processing (NLP) engine for automated inpatient criteria and identifying a working DRG. Power Chart functionality enables a work list and patient list view.

Health Maintenance allows for proactive and future directed care based on the patient's specific condition(s), diagnoses, demographics, needs and scheduled screenings. Invitations and scheduling of appointments can be done through the Health Maintenance function.

Condition management allows for specific protocol, orders and plans of care in managing a patient's condition across the continuum and encounters. Summaries provide clinicians with a consolidated view of key information and evidence-based treatment algorithms. The Readmission prevention works with the Care Management, plan of care and discharge functions to assist in managing high cost, high volume readmissions. Case managers in the ambulatory setting can then follow through with the patient post discharge and across visits.

Another component that would assist Managed Care programs would be the Cerner Health functions that include wellness advisors, coaches and the Patient portal that would allow communication to and from the patient/provider directly.

2.1.21 ANESTHESIOLOGY REQUIREMENTS (OPTIONAL)

Provide Proposer's overall summary description of how its proposed EHR System meets the needs of DHS for the Anesthesiology Department, pursuant to Section 1.21 (Anesthesiology Requirements) of Appendix H (Functional Requirements). Proposer's response for this Section is limited to 1 page.

Cerner's Anesthesia Management provides complete access to both inpatient and outpatient data

within the patient's electronic chart to help you adequately prepare for cases, create an anesthesia plan, assess risk, set daily priorities, and accurately complete documentation.

Because it operates on the Cerner Millennium architecture, our solution is the only one that unifies anesthesia care with related nursing documentation, and shares information with other Cerner Millennium solutions. An interface is not required.

With our solution, you can obtain and/or review tests and consultations, past medical history, and current medications – which are all necessary to prepare for administering anesthesia. You can also document the proposed anesthesia plan including invasive monitors and special techniques required. You can review drug therapy, as well as order and/or document administration of preoperative medications. The ASA and anesthesia type, once documented in anesthesia, updates the surgery record with the correct information.

Drug and allergy checking provides the ability to check allergies and current medications against a list of drugs built in anesthesia, and alert the provider to those which may cause a drug/allergy or drug/drug reaction. You can hover on the warning icon, click on the tooltip, and launch the interaction window to display the detailed information.

The anesthesia preop note allows for the documentation of anesthesia history, review of systems, allergies, current meds and problems, medical history, family history, social history, physical exam, pain assessment, airway assessment, results review, ASA classification, anesthesia plan, and others.

You can create an anesthesia record for patients receiving any type of anesthesia. Since Cerner Millennium solutions share a single database, patient identification automatically populates and is uniform across the patient's single electronic medical record. Any personnel, actions, device data, medications, input, output, and times can be easily recorded within the time-based view of the intra-anesthesia record.

Providers can document quickly and accurately throughout the procedure. Bedside medical device interfaces default collected values from the patient monitors onto the anesthesia record. These values can be modified if needed for accurate charting. Charting efficiency is increased with point and click, click and drag, touch screen methods, and macros. Macros allow for several events (such as a medication, fluid, or actions) to be documented with a single execution. As part of the macro, you can select to specify the values associated with each event, or leave them blank to document individual values directly on the case record.

You can also record any complications, adverse reactions, or problems that occur, along with the time and description of symptoms, vital signs, treatments provided, and response to treatment.

2.2 APPENDIX H-1 (FUNCTIONAL REQUIREMENTS ATTACHMENT) AND APPENDIX I-1 (TECHNICAL REQUIREMENTS ATTACHMENT)

Affirmatively confirm whether or not Proposer has responded to all the requirements in the checklist in Appendix H-1 (Functional Requirements Attachment) and Appendix I-1 (Technical Requirements Attachment).

Requirement	Yes	No
Proposer has responded to all the requirements in the checklist in Appendix H-1 (Functional Requirements Attachment)	☒	☐

Requirement	Yes	No
Proposer has responded to all the requirements in the checklist in Appendix I-1 (Technical Requirements Attachment)	☒	☐

2.3 APPENDIX I (TECHNICAL REQUIREMENTS)

2.3.1 ARCHITECTURE

Provide Proposer's architecture for the proposed EHR System, pursuant to Section 1.1 (Architecture) of Appendix I (Technical Requirements). Provide any high-level diagrams showing major system components, their interrelationships, and supporting diagrams and materials in response to this Section as Attachment I (Architecture). Proposer's response for this Section is limited to 8 pages.

Our architecture is a multi-tier, client/server system. Core processing (security, messaging, etc.) is separated from varied application servers, which are separate from client presentation devices. Our architecture is comprised of Presentation Software – using Microsoft Windows and Millennium Application Software, and Data Management Software – using Oracle's relational database management system. Cerner developed our distributed transaction, client/server architecture to provide higher levels of security, data integrity, greater reliability, load balancing, scalability, and better performance than that of distributed or clustered hardware.

With Cerner's system design, rather than the Windows Client application directly accessing the database, it communicates with a Millennium application server, which in turn communicates with the database. Application server communications (sometimes referred to as middleware) is the key to the high performance processing needs of physicians, nurses, and other providers in clinical care settings.

Multi-tiered, client/server systems can support thousands of concurrent users and is therefore scalable to full enterprise or nationwide roll out. Multi-tiered, client/server architecture allows you to both distribute workload across multiple servers, as well as better manage system-wide growth and performance. Additionally, a multi-tiered architecture is a critical component of adapting Web services technology to the broader audience. Application solutions that are not based on an N-tiered model will have to be redesigned to take advantage of this latest advance in technology in a graceful and cost efficient manner.

Our solutions can be deployed on a variety of hardware and operating system platforms. The client component is deployed on a Microsoft Windows 32 bit operating system; for example, Windows XP, Windows Vista, Windows 7 and/or Windows Terminal server with Citrix Presentation Server. The distributed application servers are deployed on Windows Server 2003 or Server 2008 32 bit or 64 bit. The database engine servers are currently deployed on 64 bit IBM AIX, 64 bit HP's HP-UX, or Red Hat Enterprise Linux operating systems.

Cerner assumes all responsibility for hardware in the data center with the Remote Hosting Option (RHO) model. Your institution still owns/manages your desktops and peripherals at your location. For Thin and Fat client requirements, please refer to the Cerner_Workstation_Requirements.pdf located in the Additional Reference Material section. Mobile device support falls under three categories:

Mobile PC [Devices] on rolling carts or wireless laptops. The deployment of Millennium on these

kinds of devices is typically the placement of a shortcut or icon on the desktop or toolbar that launches a Citrix session. Clients can use any technique to place such shortcut/icon that Windows supports.

Fat client with wireless card. Client may use any technique compatible with Windows to place the Cerner code on the device.

For PDA type devices [such as Motorola, Honeywell, Hand Held Products, etc.] that have embedded radios and bar code readers, Cerner offers two applications: one for nursing and meds administration and another for specimen collection. Both of these applications are very different from the Windows versions which offer equivalent and in some cases additional functionality. Cerner mobile solutions are written specifically for the attributes and real estate of the mobile device and the work flow. To manage the software component of the PDA device, Cerner recommends and supports the use of SOTI MobiControl which uses a server to store the code that is eventually pushed to the physical device. http://www.soti.net/

For smart phones, IPhone, Blackberry, IPAD, and other web enabled end user devices, Cerner's strategy is based on HTML and other web standards. Currently, these devices can launch a number of web based Millennium patient summary views and dashboards which are specifically designed for a "single click" view of the patient's current condition.

Currently Cerner supports IBM AIX operating system on Power servers, HP's HP-UX operating system on Integrity servers, Microsoft Windows Server on Intel-based servers, and Linux on Intel and AMD based servers, depending on the solution being utilized. With the remote hosting option Cerner will manage the deployment of the database server on the platform of our choosing.

Our objective is to design a system architecture that meets the needs of your current processing environment while planning for potential growth and expansion requirements. We focus on specific technology attributes, such as performance, availability, scalability, and integration, when determining the best possible system solution. In selecting a technology platform for use with our applications, Cerner evaluates the extent to which it is capable of scaling. We currently configure systems using data center equipment from HP and IBM. Both HP and IBM design and manufacture systems that scale well.

With our Remote Hosted Option (RHO), Cerner will scale the system as needed. A 10% or 20% increase in users will not affect performance. Cerner's multi-tiered, client/server systems can support thousands of concurrent users and is therefore scalable to full enterprise or nationwide roll out.

Cerner builds overhead allowances into production systems through our standard redundancy configurations. We can also take advantage of non-production system resources for utilization in the event of an emergency and usage spikes

Cerner no longer publishes documentation using the old paradigm of writing static documents and distributing these to clients in hard copy or even electronic form. Cerner has adapted social networking technology to communicate and publish all types of solution documentation to clients licensing our various solutions.

You can create meaningful customized views of information from the clinical data repository to support the vast needs of all types of roles, areas and user level preferences. Summary screens, predefined views, flowsheets, patient lists, Message Center, orders, interactive view, structured documentation templates, pathways, problem list, clinical, documentation forms, clinical summary and task list are all examples of views that can be customized by area and/ or role to meet your

needs. For example, your organization can build documentation forms to support the capture of all pertinent data describing the patient event or condition in a clear, easy-to-complete format. Your organization can define the discrete data fields within the forms and the appearance of the forms, including sections of the form and layout of the data fields. Data fields can be defined as required fields

Remote user access to a Cerner Millennium domain can be provided with Windows standard Dial-up Networking utility and third-party products such as Microsoft's Remote Access Server (RAS) or any other technology that provides a TCP/IP network connection between the Cerner client code and the Cerner server code.

Cerner designs high availability into each system using component redundancy. For maximum reliability, we are able to offer clustered solutions that provide extremely high levels of availability and continuous access for critical data and applications. For clients requesting high availability solutions, we take advantage of multi-system clustering technology in combination with software features of Cerner Millennium that allow us to provide the necessary application recovery on a clustered machine. Cerner has selected HP ServiceGuard for HP-UX and IBM PowerHA for AIX to provide the best operating system capabilities for automatically reconfiguring the available replicated resources when hardware failures or outages occur. In the event of a complete failure of a cluster, the failover or restart of the Cerner Millennium applications may be accomplished on a surviving node in the cluster. This failover and recovery/restart is generated through the modifications of supplied scripts to meet our clients' application requirements.

For high availability in the storage farm, Cerner Millennium is able to utilize multiple paths offered in the latest switched fiber channel storage area network and virtual storage arrays. All recorded information can be protected by RAID 1, RAID 0+1, or RAID 5. Cerner uses a combination of these technologies and hot spare disk drives to provide a balance of performance, reliability, and availability.

For the most demanding high availability environments, Cerner also offers solutions that can include standby databases and disaster tolerance.

Cerner uses a variety of monitoring tools such as Cerner Olympus and specific knowledge modules to proactively monitor the system around the clock.

Cerner Millennium is an online, real-time system that is designed for continuous operation. No routine downtime is required for backups, reporting, or other day to day activities. Downtime may be required for major system upgrades such as an Oracle upgrade. The client can schedule upgrades at their convenience.

Telemetry data is available for client viewing via Cerner's Lights On Dashboard Reporting System. Lights On is a systematic approach to improving system stability through collective knowledge and proven practices acquired through the continual monitoring and management of the Cerner Millennium environments by CernerWorks (Cerner's remote hosting organization). This Cerner led engagement will install, configure, and demonstrate the use of a set of tools designed to provide additional information about your production Cerner Millennium technical environment.

Cerner's Response Time Measurement System (RTMS) for Millennium provides the ability to view and trend application response times from the time a user clicks a button in a Millennium application, to the time the transaction is processed and focus returned to the user. These RTMS timers capture the amount of time that transactions are processed by middleware or database components – the user's wait time experience. The RTMS timers are written to flat files on each

application back-end server and can be viewed in several ways:

• A standalone RTMS viewer provided by Cerner to its clients, that allows viewing of the raw RTMS data

• Cerner Olympus, which allows for viewing, trending, sorting, and searching on the raw RTMS data

• Cerner Lights On Network, which is populated nightly for each client and shows the long-term trending statistics for each client's RTMS data.

Cerner has selected HP ServiceGuard for HP-UX and IBM PowerHA for AIX to provide the best operating system capabilities for automatically reconfiguring the available replicated resources when hardware failures or outages occur.

For clients who take advantage of Cerner's Remote Hosting option, Cerner's primary defense against unplanned outages is prevention. Cerner utilizes a state-of-the-art technology center to host Cerner Millennium systems, complete with multiple power feeds from two different power generating sources, backed up by multiple UPSs, backed up by multiple generators with enough fuel storage capacity to run for several days. Likewise, for telecommunications Cerner utilizes redundant carriers and installs redundant circuits (each circuit is sized to carry the full load). Our technology center is fed by 4 different central offices and is fed by 2 different SONET rings. Cerner does not rely on Internet connectivity for any mission-critical functions due to its variations in availability, stability, and performance; however, in the unlikely event the dedicated frame circuits are unavailable, the Internet can be used as a backup.

Also available as an optional service, for an additional fee, are Hot Site Disaster Recovery services. Hot Site Disaster Recovery services add an additional layer of redundancy and protection. With this service, a mirrored system is set up in an alternate data center, constantly being updated by transactions from the primary production database. In the event the primary production system is unavailable for any reason, the Hot Site Disaster Recovery system can be activated quickly as the primary system, providing even greater protection.

Software components are located in Appendix Q (Pricing) document. Cerner's application tier is split across the PC client and host server cluster. The client is programmed in Visual Basic, Visual C, and Java. These languages utilize many Microsoft Foundation classes, COM, and OCX objects. On the host cluster where the application servers and Oracle database resides, Cerner programs in C++, enterprise Java, and Cerner's adhoc report writing tool's scripting language. For our Internet browser development, we use Dynamic HTML, Java Script, and enterprise Java. Cerner uses Oracle 11g as our RDMBS. The Cerner Message Bus (CMB) is our inter-server/inter-nodal communications medium for client/server applications. It is a message passing middleware, which ensures reliable information exchange using a request-reply structure. Our supplied reporting tool is Discern. Discern Explorer is a full-featured, fourth-generation programming language, patterned after Structured Query Language (SQL). All Cerner Millennium applications use Discern Explorer to select, insert, update, and delete data. The planned

With the remote hosted option, clients will connect through Citrix options. Bandwidth Formulas (for network planning purposes only):

• Medical Device Instruments:

The formula listed below is the minimum requirement for instrument interfaces:

Number of Instruments * 1.2 Kilobits/second

Example: 14 instruments * 1.2 = 16.8 Kilobits/second

- Barcode Printers:

The formula listed below is the minimum requirement for bar code printers:

Number of Bar Code Printers * 1.5 Kilobits/second

Example: 10 Bar Code Printers * 1.5 = 15 Kilobits/second

- Laser Printers:

The formula listed below is the minimum requirement for laser printers:

Number of Postscript Pages/minute * 1.3 Kilobits/second

Example: Four 17 page per minute laser printers

Four * 17 pages/minute * 1.3 Kilobits/second = 88.4 Kilobits/second

- Microsoft Windows Devices for thick client PC deployments of Cerner Millennium:

The formula listed below is the minimum requirement for PCs running Cerner solutions on Microsoft Windows:

Number of Microsoft Windows devices * 32 Kilobits/second

Example: 40 Microsoft Windows devices * 32 = 1280 Kilobits/second

- Microsoft Windows Devices: for thin client PC deployments of Cerner Millennium using Citrix:

The formula listed below is the minimum requirement for PCs running Cerner on Microsoft Windows:

Number of Microsoft Windows thin devices * 20 Kilobits/second

Example: 40 Microsoft Windows devices * 20 = 800 Kilobits/second

The formulas above are averages that can be helpful in estimating individual network bandwidth requirements for any Cerner Millennium Microsoft Windows-based application. The client agrees to provide a minimum of 128 Kilobits/second bandwidth per circuit on any given segment end-to-end.

With our optional Application Management Service (AMS) offering, County would submit requested changes to Cerner. Cerner would make the modifications to the system as needed. If the optional offering is not selected, County would be required to make the changes to business rules.

2.3.2 INFORMATION MANAGEMENT

Provide Proposer's proposed information management strategy for the EHR System, pursuant to Section 1.2 (Information Management) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Oracle 11g is the current standard

Two levels of storage are supported. The first is the use of the SAN storage configured in an applicable RAID format followed by offline storage as tape, DVD, CD or MOD.

Please refer to section 3.1 of Exhibit N.2-1

Contractor will utilize its own back-up and recovery policy. Policy can be provided upon request.

Three primary environments will be configured to support your Cerner System:

- Certification -- Test changes prior to implementing in production
- Production -- Daily transactions

- Training -- Training is typically a mirror of production

With Cerner's System Design, there is no need to purge or archive patient result data.

Since patient result data is not purged from the Cerner Millennium database, users at your organization have immediate access to the entire patient record, including information from current and past visits. The workflow tables containing data that is no longer required can be purged according to specific selections that the client can make.

Cerner's DM Purge Job Manager is the tool we use to purge that data using user input as criteria. This tool uses purge templates that are created for each Millennium solution that is given client defined criteria to determine what data is to be purged. Cerner Millennium Operations allow clients to schedule when purge templates defined in DM Purge Job Manager will execute. Each and every purge template in the DM Purge Job Manager will have a section in the DM Purge Job Manager help file describing the following:

- High level description of information that will be purged
- Tables impacted by the purge
- Details on criterion that must be configured

Cerner is considered an open system and can readily communicate with foreign systems by either sending or receiving data. Most of the data exchange is accomplished via electronic interfaces, but data can be extracted from the Cerner Millennium database and sent in an agreed upon format to a foreign system or database. Such an example would be data exportation to a comma-separated value file. All data will be transported under encrypted pathways.

Cerner applications utilize an Oracle Relational database system and gain the benefit of Oracle's row level locking capability, which allows multiple users to access and view a patient's chart concurrently. In the event that more than one user attempts to update the same field at the same time, the system will lock the field and allow one user to make their change, and then unlock it for the next user to change. The changes are sequential rather than concurrent, averting the situation of a locked chart. This feature works regardless of the type of change being made.

2.3.3 SYSTEM SECURITY

Provide Proposer's proposed security strategy for the EHR System pursuant to Section 1.3 (System Security) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Position-level security logic, sets permission to access an application or a task within an application, or a task group based on a user's position. Positions are defined for every user in the system.

A user is assigned to a position through the user maintenance tool. A user's position is designed to include all the tasks that might be needed to perform his or her job. Multiple users with similar job requirements can be associated with a single position, which aids in the maintenance of security profiles. Only users with appropriate privileges are granted access to the user maintenance tool.

Positions are created as reference data. Employee position assignments within the system may or may not be similar to employee titles within an organization. All positions associated with an application group have the same access to an application, although application groups can be edited to grant/revoke access at any time.

The Cerner Millennium architecture provides access at the individual task level. Each function that a user can perform within a Cerner Millennium application is defined as a task, and each of these tasks can be included or excluded from the application group associated with a user's position. This enables flexibility within the system, as well as improving ease of maintenance.

For applications involved in ancillary departments, access to data is managed through tasks (for the data types accessible) and through the association of users to the organization where patients are registered or admitted for service (for access to visits). Ancillary users can further be limited to access to only certain performing sites where they are assigned to work. Access to specific data elements is further managed through data privileges for direct patient care applications.

Cerner Millennium architecture provides access at the individual task level. Each function that a user can perform within a Cerner Millennium application is defined as a task and each of these tasks can be included or excluded from a user's position. This enables flexibility within the system, as well as improving ease of maintenance. Access to patient information is role based, on a need to know basis. System support and maintenance personnel do not have access to patient information.

With our optional Application Management Service (AMS) offering, County would submit requested changes to Cerner. Cerner would make the modifications to the system as needed. If the optional offering is not selected, County would be required to make the changes to business rules.

2.3.4 HOSTING

Provide Proposer's proposed hosting strategy for the management, security and performance of the computing systems required to operate the EHR System pursuant to Section 1.4 (Hosting) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 5 pages.

When employing our Remote Hosted Option (RHO), CernerWorks acts as the client's remote IT department, providing the functionality, management, and support of Cerner's solutions while minimizing the client's investment of capital and human resources. RHO is available to all Cerner clients.

An RHO client purchases Cerner software, as well as their desktops and peripherals, and contracts with CernerWorks for customer support and implementation services. The organization also contracts for the use of system hardware and related network services in one of our Cerner Technology Centers (CTC). The CTC provides the hardware, secure hosting, connectivity, and IT expertise that keeps the systems running.

Application processing and data storage is hosted at the CTC and is maintained by a staff of Cerner system experts. CernerWorks takes responsibility for system maintenance, backups, upgrades, and client support. Continuous system monitoring identifies potential issues before they arise and ensures optimum system performance.

RHO provides superior performance, security, reliability, and scalability with a lower up-front financial commitment from the client by combining hardware, networking technologies, and technical expertise. It allows healthcare organizations to leverage the most sophisticated and powerful IT solutions available today. RHO can provide significant cost savings and competitive advantages. It helps avoid depreciation and obsolescence and frees your IT department to focus on core issues.

Cerner's RHO solution provides the following:

- Necessary technology skill sets
- Cold site disaster recovery
- System redundancy
- Rapid addition of clinical sites/scalability
- Allows business focus on "core competency"
- Guaranteed system availability and performance

For remote hosting, Contractor does not calculate support availability; however, system availability is calculated per section 4.3 of Exhibit N.2-1.The Immediate Response Center is available 24x7x365 for critical issues.

Contractor will not agree to an SLA of 99.99%, Contractor will agree to a maximum of 99.9%, reference section 4.3 of Exhibit N.2-1; Contractor does not have information which can be shared as part of an RFP; however, once an NDA is in place, then details are capable of being provided validating Contractor's ability to maintain 99.9% system availability.

Severity levels and commensurate response times related to performance issues, incidents, and loss of service are not determined during the proposal process. These items are discussed during contract negotiations.

Our Monitoring tool, Olympus, provides many functions to monitor the overall health of the system at the different layers. CernerWorks will provide monthly up-time reporting statistics.

Multiple layers of physical security exist, beginning with the off-site location of the alternate data center. The structure has perimeter security, facility security, and biometric authentication security throughout. More advanced whitepapers can be provided that elaborate on physical security. The Cerner database is secured through the Cerner application servers with end users accessing the Cerner application server rather than the database directly. We rely on Oracle security for the central database to provide security to the data in Oracle.

Methodology: All systems not specifically identified in the "Exclusions" portion of the RHO backup policy will be backed up on a daily basis to minimize the exposure to loss of mission critical or project sensitive data.

Systems and Utilities

Open VMS, Windows, and Linux: An appropriate backup solution will be used to perform backup and recovery operations of operating system and non-operating system data.

AIX: AIX backup utilities are used to perform mksysb (image) backup and recovery of AIX Operating Systems. An appropriate backup solution will be used to perform backup and recovery on all systems configuration information and non-operating system data.

HPUX: HPUX backup utility mk_net_recover will be used to perform a backup and recovery of the HPUX Operating Systems. An appropriate backup solution will be used to perform backup and recovery on all systems configuration information and non-operating system data.

Oracle: Oracle RMAN utility will be used to perform database backup and recovery of Oracle databases. The RMAN utility will integrate with an appropriate backup solution to provide a transport to backup media.

Backup Window: Backups (full or incremental) will be conducted daily during off-peak business hours in the client's time zone. Backup jobs will be staggered throughout the window to ensure optimal performance and reliability.

Maintenance Window: A weekly window will be scheduled to perform maintenance on the backup system. Scheduled restores will not take place during this window; however, emergency requests will be evaluated as requested.

Full Backup: Full backups will be conducted a minimum of once per week.

Incremental Backup: Incremental backups will be conducted daily with the exception of the day when a full backup is conducted.

On-Demand Backup: On-demand backups, outside of the normal schedule, can be conducted to support project work with prior approval from the Infrastructure Services team.

Cerner's Kansas City data center is a 113,000 square-foot facility; housing 3 separate 7,500 square foot Data Centers, and is a dual-fed, redundant data operation. Cerner's Lee's Summit data center is a 70,000+ square-foot, dual-fed, redundant data operation. Both facilities operate under supervision 24 hours a day, 365 days a year and are intended to provide uninterrupted power and service for Cerner clients in a secure environment, specifically designed to eliminate client downtime. Contractor ensures redundancy through High Availability of production system servers, also reference section 3.2 of Exhibit N.1-1. Transference/fail-over to Contractor's alternate datacenter is pendant upon County contracting for a Disaster Recovery service. If contracted for DR, Contractor and County will establish the process which will be followed and the circumstances dictating a failover occur.

With our Remote Hosted Option (RHO), your production system is under constant monitoring. Our operations staff is alerted in the event of a problem via an automated toolset. If the issue cannot be resolved promptly, Cerner escalates the issue on your behalf at the 30 minute mark with our internal Immediate Response Center (IRC) and, if appropriate, engages a special escalation team. If you feel you need or warrant additional service than what is being offered, Cerner offers several channels for you to escalate the issue. The Client Relationship Executive (CRE) has ultimate responsibility to your organization. Your CRE is kept abreast of any situations and is your initial point of escalation for you. In addition, there is a geography-based leadership team available to you when needed to handle any service issue you might have, including a Service Delivery Manager who is assigned to your facility.

Cerner installs the service packages in coordination with the client's application management team (or Cerner Consulting). There are several points of monitoring within the hosted solution that we provide. At a high level, both front-end and back-end servers are monitored for utilization, networks are monitored for dropped packet rate and round-trip latency, databases are monitored, interfaces queue depths are monitored, and key aspects of the applications themselves are monitored. Automated response systems and our 24x7 support teams are in place to respond to various alarms.

Cerner publishes major releases every 1-2 years. We offer monthly support updates for our releases. Cerner installs the service packages in coordination with the client's application management team (or Cerner Consulting). Your organization is responsible for testing the new release/update. Typical procedures for moving updated software, such as new service packages, to production require the software to be tested in a non-production domain. Once all software changes have been tested the software is moved from the certification domain to the production domain. Each software package has specific instructions included regarding how the software should be rolled out to the production domain, should the need arise.

Any Change Request that will result in a deviation in the agreed upon design, or additional code to be developed or loaded into the any of the secure BUILD/TRAIN/CERT/PROD environments will be analyzed through the Change Control Process outlined below.

Objectives:

- Ensure consistency in process of documenting change requests

- Define standards for reviewing requests

- Provide mechanism for impact assessment

- Determine necessary approvals needed for sign-off

- To document when change occurred, who executed the change and measures that were taken to ensure the change was successfully applied.

The process steps that will be utilized during the project are provided below.

1. The client identifies an issue or necessary change. They fill out the change request form, which includes an explanation of the need/issue, description/reference number, a proposed solution if known, and suggested integration points, which will be verified by the Cerner Solution Delivery Consultant (SDC).

2. The change request forms are collected and discussed during a weekly team meeting surrounding change control issues. Agenda items for this meeting will include prioritizing issues and discussing any points of integration. This meeting will determine whether these changes will be approved or not approved. It is an internal client meeting with the Cerner Integration Architect in attendance.

3. The approved change requests are tracked on the Change Request Log spreadsheet and then logged as a Service Request to the appropriate Cerner Solution Team via Navigator (our online service request tracking tool). After maintenance training, the Cerner SDC will notify the Client to make the Cerner approved changes.

4. Any additional costs, work effort, scope changes, or timeline impacts will be documented in the Service Request. The Cerner SDC will follow the escalation management process for such issues.

5. The Cerner SDC will communicate to the Client the resolution and the projected implementation timeframe.

6. The Cerner SDC or Client will institute the change in the appropriate environment (BUILD, CERT).

7. The Client Team Leader will be responsible for testing the change according to Unit/System/Integration validation standards laid down in the Test Plan.

8. Once tested, Cerner or Client will move the change to the appropriate domain. The Cerner SDC will follow the Production Environment Change Authorization (PECA) process if the change is needed in the production domain.

9. The Cerner SDC updates the issue/resolution on the SR. The Client updates the issue/resolution on the Change Request Log.

10. The Change Request Log is to be reviewed on a weekly basis by the Cerner Integration Architect and the Client.

11. The Client Team Leader will be responsible for informing the appropriate people regarding training issues, change updates to facility staff, as it relates to the completed change.

12. The Client will retain the paper Change Request forms, along with any supporting documentation, emails, or screen shots (before and after) as a record of change. The Change Request Log will be retained on SharePoint.

Your organization will define needed credentials, and delete specific accounts. Our AMS Service can offer help with any needed additional support.

Discern Explorer can generate output file in many formats including text output that could be imported into Word, and .csv that can be imported into Excel. You can also create .pdf and other types of output.

Should County need to migrate off of the proposed EHR system, we will work with you to establish a data conversion plan. Depending on the other vendor's requirements, Cerner can either send information via HL7 or download table data to .csv that can be imported into Excel.

We have real-time monitoring of the network for intrusion detection. Any breaches or vulnerabilities are acted upon in accordance with their risk and potential impact. Intrusion detection is a core component of the data center infrastructure and data traffic is continually monitored for attacks and anomalies.

Vendor patches are analyzed upon announcement. If the vulnerability is identified as a critical risk factor, and the vulnerability exists within our environment, patch deployment takes place immediately. Otherwise, deployment is deferred until routine distributions are performed.

Information regarding systematic enforcement of access controls is provided in Sections 3.3 and 3.4 of Exhibit N.1-1.

With Cerner's Remote Hosting Option, as opposed to an ASP model, client environments are secured using firewall and router access control layers separating clients into different PVLANS on separate secured systems. Within each system, authorizations to data are managed by application level security. Account information and privileges are stored within the client's database.

P2 Sentinel is our preferred auditing tool for this type of incident.

2.3.5 INTERFACES

Provide Proposer's proposed interface strategy for the EHR System pursuant to Section 1.5 (Interfaces) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 3 pages.

Our interfaces are based upon the Universal Interface Specifications documents which are designed from the various chapters of the HL7 standard. We do not implement off-the-shelf interfaces for a particular vendor/product, but generic interfaces that are configurable and may require some custom scripting. A specification meeting is held early in the implementation phase to discuss functionality of each specific interface. The main objective of the specification meeting is to create a specification document that can be used as a blueprint by the FSI System Analyst (FSI-SA) and as a site-specific reference for our clients. The meeting will detail configurable settings associated with each interface for the client. In some cases, we will implement an ANSI X.12 interface or perhaps a custom interface, if required.Our previous clients utilize the same formats listed above.

Cerner applications use one or more interfaces to communicate with other foreign (non-Cerner) systems that exist within a healthcare organization or to send or receive data from a foreign entity. A specific area in a healthcare organization such as patient registration generally has a "master system" which collects all the data that is required to admit or register the person, such as demographics, insurance and guarantor data, allergies, and so forth. Other systems in various ancillary areas within this healthcare setting have a need to know this information in a timely manner so they can place orders, perform procedures, administer drugs, and so forth.

Interfaces implemented for a specific client are determined by the mix of Cerner and non-Cerner

systems and the data that needs to be exchanged among these systems.

Cerner has implemented approximately 6,000 Millennium interfaces with the major suppliers in the healthcare marketplace for the following types of systems:

- Admission, Discharge, Transfer, (ADT)
- IT or HIS
- Patient care (including medical devices)
- Scheduling
- Physician office
- Financial
- Eligibility checking (stored at the encounter level)
- Transcription
- Coding/Abstracting
- Dietary
- Radiology
- PACs (via Mitra Broker)
- Laboratory
- Reference labs
- Pharmacy dispensing and robotics
- Laboratory devices (instruments) and robotics
- Supply chain

Our integration engine currently meets basic interface monitoring, routing, and customization requirements. Our monitoring tools enable users to easily start, stop, and troubleshoot interface problems. Messages are saved for investigation and can be replayed as needed.

System Integration Manager is a Cerner GUI tool that provides easy access to build, configure, and troubleshoot interfaces. This includes the ability to view message content, errors, and the timestamp.

Sometimes, the most difficult interface problem Cerner faces is an interface specification language barrier between the Cerner system and the foreign system. Cerner may have different terminology for the same issue, or similar terminology for different issues. Another challenge is insuring client has adequate staffing committed to perform the testing required. Cerner has provided the recommended client staffing that is needed for the project to insure success.

Another issue can occur with the timing of the implementation.Too many times we are asked to make the interfaces work before there is a sufficient build of the database on either side(It is important to insure that there is a sufficient build of the testing databases on both sides of the interfaces to insure that the interfaces can be tested properly in integration testing).

Cerner continually reviews their processes to make them better. We continue to add education training programs, literature, and take client advice into consideration to improve our processes.

Cerner's integration strategy uses the same three-layer architecture structure as the other modules of the Millennium system. Our suite of interface software, known as Open Port, can run on the same server as other Millennium applications, or it can run on a separate server, depending on the

configuration of a client system. No third party software is required, but if the client has a third party interface engine, such as eGate, Cerner's interfaces can communicate with it, by sending and receiving transactions.

Cerner's CareAware iBus is the evolution of BMDI's, creating a continuous available and fault tolerant architecture, to support the complete integration of bedside medical devices.

We designed our device architecture to bridge the gap between medical devices and patient information by connecting information from various monitoring devices to the clinician workflow and electronic medical record. As a result, clients can achieve the following:

- Streamlined nursing workflow by incorporating documentation at the point of care
- Consolidated medical device information to support patient safety
- Platform independent, if the devices push data via a network connection or serial port, we can consume data from the device.
- Two-way communication depends on the monitoring medical devices ability to send and receive data.
- Support at least 1000 device connections at the same time without problems
- True plug-and-play device connectivity into the electronic health record

2.3.6 REPORTING APPROACH

Provide Proposer's proposed reporting and analysis capabilities pursuant to Section 1.6 (Reporting Approach) of Appendix I (Technical Requirements). Proposer's response for this Section is limited to 2 pages.

Discern Explorer is a full-featured, fourth-generation programming language, patterned after Structured Query Language (SQL); therefore, it includes a wide range of powerful commands. Discern Explorer provides over 250 built-in functions and commands specifically written for Cerner Millennium transactions.

All data captured and stored in Cerner Millennium can be accessed using Discern Explorer since all Cerner Millennium solutions use Discern Explorer to write to the Cerner Millennium database. This provides unlimited possibilities for using Discern Explorer to query and report on the Cerner Millennium data. With Discern Explorer you can create anything from simple ad hoc queries, to formatted reports, to complex programs that execute multiple queries, create temporary tables, combine information from multiple queries, flex queries based on user input, create complex expressions, calculate aggregates, and everything in between. The Discern Explorer language is an SQL based language that is proprietary.

Using Discern Explorer, you can extract user-selected information from Cerner Millennium data. You can create extract files in practically any format. Extract files in common formats like comma separated (.csv), fixed column width, and tab or character delimited, are often created using Discern Explorer. The output of Discern Explorer queries can be sent to files such as ASCII, PostScript, .PDF, HTML, as well as label printers such as Zebra and Intermec, and other common file formats. The data then can be imported into other PC applications that use third-party spreadsheet, database, or statistical packages. Discern Explorer allows creation of graphs directly in a report using the Layout Builder. This function eliminates the need to export the data into a third party tool to create graphs.

You can still export the data to third party tools and create graphs if desired.

There are two options to meet the reporting standards required by CCHIT. First, CCL based reports that can be used to meet the reporting needs. These are not very detailed but meet CCHIT requirements. Second, our Audit logging solution, P2Sentinel, provides more detailed reports that meet CCHIT requirements.

Cerner believes that oversight by regulatory agencies is important for ensuring that healthcare environments are reasonably free of risk to patients, visitors, and employees. Cerner is committed to meeting the applicable requirements established by federal law or other applicable regulations. The licensed software will, upon first productive use and during the term of the agreement (so long as your organization is on support), enable your organization to meet the requirements of any applicable federal or state laws in effect on the effective date.

Your organization can use Discern Explorer to write custom reports using any discreet data in the Millennium system.

Cerner has developed a proactive monitoring tool called the Lights On Network. Lights On is a systematic approach to improving system stability through collective knowledge and proven practices acquired through the continual monitoring and management of the Cerner Millennium environments by CernerWorks (Cerner's remote hosting organization).

Our data structure is a relational database, RDBMS. We provide data dictionary information and tools for researching the data models.

The output of Discern Explorer queries can be displayed on the screen and then saved as a comma separated (.csv) file for importing into PC applications. You can create extract files in practically any format using Discern Explorer.

All data in the Cerner Millennium system or custom tables created by your organization can be used in Discern Explorer ad hoc queries. These ad hoc queries can be stored in a file for future use; they also can be created as compiled programs that can be accessed and executed as required.

2.4 APPENDIX J (IMPLEMENTATION REQUIREMENTS)

2.4.1 PROJECT MANAGEMENT

(i) Methodologies and Tools

Provide Proposer's proposed project management methodology for the EHR project, pursuant to Section 1.1(a) (Methodologies and Tools) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Cerner's implementation methodology, MethodM, is our approach to working with clients to deliver value through our Cerner Millennium solutions. MethodM has been used in healthcare organizations ranging in size from single-doctor practices, to health systems, to entire countries. This modular methodology draws upon proven practices from a host of past client experiences. With it, a team is able to deliver the intended outcomes of a project with discipline, predictability and efficiency. But the utility of MethodM goes far beyond your initial deployment. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower

your total cost of ownership.

Cerner MethodM is an integrated platform, providing these important features:

1. Outcomes-based approach
2. Aligning with your organizational imperatives
3. Disciplined and predictable processes
4. Providing the right resource at the right time
5. Leveraged client interaction and experience
6. Proven to reduce risk and variability
7. A logical continuum
8. From procurement to clinical transformation

The benefits of MethodM as an implementation methodology include the following:

1. Predictable/Structured Methodology: Cerner's professional services methodology, MethodM, bolstered by 30-plus years of implementation experience, offers a fixed-fee pricing model- one that provides our clients with predictable cost of ownership. Cerner's methodology was established to support the execution of a standardized, event-based implementation approach to deliver predictable results and to accelerate the speed at which value can be achieved from Cerner solutions.

Our proven approach utilizes an event-based, disciplined methodology with prescribed design choices. Milestones have clear prerequisites and objectives which result in homework deliverables. By isolating sources of project variance and by creating appropriate controls, the event-based methodology ensures a predictable project experience. Predictability stems from a clearly defined project scope that leverages standard content.

2. Better Outcomes: MethodM enables your team to draw upon the collective experiences gained from more than 1,500 clients, over 5,000 conversions, and 2,100 Cerner consultants. No other health care technology provider has invested as much to bring you real-time access to such practical subject matter- expertise. These lessons-learned are integrated into a rich methodology allowing you to leverage that depth of knowledge—every day.

3. Lower Total Cost: The MethodM Approach includes access to tools such as MethodM Online. This capability features integrated project management, collaboration and workflow specifically created to help you contain costs by reducing on-going project variance, increasing workflow efficiency, and optimizing human resource utilization. But the utility of MethodM goes far beyond your initial deployment. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership.

4. Integrated Platform: Cerner MethodM is an integrated platform, providing these important features:

- Outcomes-based approach - Aligning with your organizational imperatives
- Disciplined and predictable processes - Providing the right resource at the right time
- Leveraged client interaction and experience - Proven to reduce risk and variability
- A logical continuum - From procurement to clinical transformation
- Online Toolset: MethodM is more than just an approach, it is a rich online toolset that project teams use to design, build, and manage implementation projects. MethodM Online includes

Enterprise Microsoft Project, which allows multiple users to access the project plans. This is a very powerful aid that gives individuals the ability to track and log their project tasks. MethodM Online also contains data collection tools, including the Design Decision Tool, which tracks critical design decisions and their compliance with known best practices. Other features of MethodM Online include an issues tracking system, a documentation library, a project SharePoint repository, and management reporting.

6. Automated Implementation Tools: Finally-we provide an automated toolkit –Bedrock--that eliminates much of the variance and error in building and maintenance tasks. Bedrock uses tools, known as "wizards," to configure the system based on survey questions, forms, work charts, legacy data and graphical displays. The tool, through the use of a natural language approach, reduces learning curves and time required to master implementation build tools. Embedded in the tool are common medical terminologies that leverage Cerner's executable knowledge content and capabilities. It also is designed to understand the dependencies among build tasks, resulting in cleaner implementations with less variance.

The capability of MethodM continues to evolve based upon the ever changing needs of our clients, the growth and sophistication of Cerner Millennium, and industry demands for dramatic cost-reduction and simplicity.

We agree that an extensive level of current state documentation isn't worth the effort. We focus on understanding the key aspects of the client's workflow that will drive design decisions through our Strategic Workflow Assessment process. We close out defining our future state using a Stop, Start, Continue method which identifies which current key activities will no longer be done, which will continue and which new activities will be completed per role.

Clinical Automation is Cerner's approach to automating Clinical and business workflows with Cerner solutions. Our clinical automation experts facilitate the design and implementation of clinical systems that impact nursing, physician and ancillary departmental workflow. It is part of our MethodM Implementation methodology and brings both clinical and solution design expertise to our implementations. Best practice models are embedded in our implementation methodology as well as in our MethodM Online tool. As a part of MethodM, we will do a walk through to validate current workflow/ processes and offer suggestions for improvement to said workflows based on best practices and client expected outcomes. Additionally, MethodM Online contains data collection tools, including the Design Decision Tool, which tracks critical design decisions and their compliance with known best practices.

Throughout the configuration phase of the implementation, the Cerner Solution Architect and the Cerner Solution Delivery Consultant will assist County in determining the best solution configuration for your system. They will assist with design sessions that identify key design decisions that need to be made, assist County in working through complex design concepts, and provide context around data collection materials.

All project documentation is stored in the MethodM Online tool. The MethodM online web application sets clear expectations and accountability for engagement teams by defining the roles for

each team member and providing customized task lists along with links to documentation that are relevant to the tasks. All team members have access to upload and download project artifacts such as worksheets and client-customized materials.

As stated previously, MethodM has been used in healthcare organizations ranging in size from single-doctor practices, to health systems, to entire countries. This modular methodology draws upon proven practices from a host of past client experiences. The events and sessions are the same regardless of the size of the project.

The Statement of Work is included with our response as Exhibit A.

As we encounter challenges during any aspect of a project, we develop strategies to minimize the risk and immediately incorporate those strategies into our implementation methodology. Cerner uses a best practice approach and we are consistently updating our lessons learned so that we can pass this information along to the next implementation. Cerner also has a team dedicated that analyzes the issues and problems that arise during implementations and then creates action plans around the documented challenges. This information is incorporated into the process to hopefully lessen the impact of that issue going forward.

(ii) Change Management Methodology

Provide Proposer's proposed change management methodology, pursuant to Section 1.1(b) (Change Management Methodology) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Embedded within our methodology, which is used on all client engagements, is a Leading Strategic Change Workshop. The Leading Strategic Change Workshop is a two-day event that improves your organization's ability to create an organizational change campaign to influence behaviors and realize benefits. To help define and execute effective change strategies, the workshop guides the workshop's participants through the process of introducing and managing change in an organization. Day one of the workshop covers necessary skills, tools, techniques, measurements, and processes to ensure success in managing change. Day two of the workshop identifies a strategy to prepare end users for implementation of Cerner solutions. It addresses the timeline, gap analysis, equipment requirements, and supplemental resources to educate end users. A baseline for focused discussions and helping guide the organization in preparing end users is delivered to you in the learning plan document, which is a living plan that should be revisited and updated to support each stage of the project.

In addition to the Workshop, Cerner will engage a Clinical Strategist for the implementation. The Clinical Strategist is the Cerner counterpart to the client Transformation Coordinator and works with the Executive Sponsor, Physician Leader, Project Manager and other client leaders to develop and implement strategies to manage the organizational change associated with system implementation. Change management activities include data gathering and analysis, change planning, coaching, measurement planning, and developing clinician engagement and adoption strategies.

Clinical Automation is Cerner's approach to automating clinical and business workflows with Cerner solutions. Our clinical automation experts facilitate the design and implementation of clinical systems that impact nursing, physician and ancillary departmental workflow. It is part of our MethodM Implementation methodology and brings both clinical and solution design expertise to our implementations. The clinical automation team includes physicians, nurses, and solution architects that consult on both workflow and solution design, ensuring an integrated approach to clinical systems implementation. Clinical automation promotes a state of profound, fundamental, and lasting change. Clinical automation is aligned with your strategic imperatives, is focused on both individual and organizational behavior practices and is enabled through the automation of clinical and business workflows. Clinical automation uses a series of disciplined events and activities led by Cerner's clinical experts. This service is embraced by clinicians because is ensures patient safety, promotes continuous improvement and significantly enhances clinical outcomes.

Our methodology includes several adoption events throughout. The adoption events include the following:

- Strategic Assessment Stakeholder Analysis
- Governance Planning
- Communication Planning
- Benefits Workshop
- Onsite Walkthrough Assessment
- Benefits Finalization
- Governance Review.
- Benefits Presentation
- Clinical Design Guidance
- Order Set Workshop
- Medication Integration Session.
- Workflow Localization: Change Management
- Physician Documentation Workshop
- Job Impact Analysis
- Policies and Procedures
- Role-focused Education
- Downtime Procedures
- Clinical Conversion Readiness Assessment
- Benefits Status Check
- Training
- Clinical Conversion Support
- Clinical Post Conversion Assessment
- Post Conversion Benefits Check

Additional Clinical Automation service offerings include:

- Strategic Assessments and Executive Alignment
- Communication Planning and Delivery
- Project Governance and Accountability Models
- Outcomes driven Role, Venue, Condition Design
- Workflow localization –Disciplined and standardized sessions to validate future state, completion of all collateral (Start/Stop/Continue) gap analysis, and preparation for workflow training sessions.
- Physician workflow Physician Support and Adoption Programs
- Post-Conversion Adoption Assessment and alignment – Assuring End User Adoption
- Clinical and Business Process Optimization

For an additional fee, Cerner's Continuous Adoption Services package provides the resources your organization needs to meet Meaningful Use through successful adoption. A team of Cerner experts delivers a package of services and solutions to lead you through adoption planning and reporting. The package includes onsite meaningful use readiness workshops to analyze your system, identify behavior change opportunities, and plan for adoption support. Also included is the LearningLIVE solution, offering clinicians relevant learning resources in the context of their workflow. A team of dedicated learning experts leverages actionable end-user adoption reports and delivers adoption coaching and support throughout the entire process.

Benefits to the client

1. Understand Meaningful Use requirements to maximize benefits from the federal economic stimulus package
2. Create a change management campaign to realize measurable adoption results
3. Provide immediate coaching and education targeted towards areas of need
4. Increase end user adoption and system knowledge

As we encounter challenges during any aspect of a project, we develop strategies to minimize the risk and immediately incorporate those strategies into our implementation methodology. Cerner uses a best practice approach and we are consistently updating our lessons learned so that we can pass this information along to the next implementation. Cerner also has a team dedicated that analyzes the issues and problems that arise during implementations and then creates action plans around the documented challenges. This information is incorporated into the process to hopefully lessen the impact of that issue going forward.

For additional strategies on change management please refer to section iv Project Management Plan.

(iii) Configuration/Adaptation Methodology

Provide Proposer's proposed configuration/adaptation methodology that will be utilized in Proposer's project approach, pursuant to Section 1.1(c) (Configuration/Adaptation Methodology) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 3 pages.

As previously stated, MethodM is our approach to working with clients to deliver value through our Cerner Millennium solutions. This modular methodology draws upon proven practices from a host of past client experiences. With it, a team is able to deliver the intended outcomes of a project with discipline, predictability and efficiency. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership.

Cerner MethodM is an integrated platform, providing these important features:

1. Outcomes-based approach
2. Aligning with your organizational imperatives
3. Disciplined and predictable processes
4. Providing the right resource at the right time
5. Leveraged client interaction and experience
6. Proven to reduce risk and variability
7. A logical continuum
8. From procurement to clinical transformation

The MethodM online web application sets clear expectations and accountability for engagement teams by defining the roles for each team member and providing customized task lists along with links to documentation that are relevant to the tasks. All team members have access to upload and download project artifacts such as worksheets and client-customized materials.

As part of MethodM, Cerner uses our innovative Bedrock system. Cerner Bedrock is an innovative technology of intuitive wizards using natural language to guide you through the process of designing, building, and maintaining your Cerner Millennium system. Bedrock uses tools to configure the system based on survey questions, forms, work charts, legacy data and graphical displays. These wizards make data collection more of an integrated approach. This tool uses a natural language approach to reduce learning curves.

Embedded in this tool are common medical terminologies that leverage Cerner's Executable Knowledge content and capabilities. In addition, Bedrock is designed to help you understand the dependencies among build tasks resulting in cleaner implementations with less variance and greater supportability. It incorporates real-time viewing and testing because configuration happens as design happens. It also reduces the design and configuration errors by replacing manual steps (spreadsheets) required for data collection with embedded pre-defined content options presented within the wizards. Most importantly, clients who leverage Bedrock realize a reduction in time to implement between 35 - 50% from those who do not use the tools.

Rather than build data from scratch, Bedrock uses a foundational layer of data developed from lessons learned through more than 8,600 Cerner Millennium implementations. This foundation layer simplifies and expedites the implementation process, allowing you extra time to tailor the data to fit your requirements. Some of the major benefits of this tool and wizard include:

1. Reduces design and configuration errors by replacing manual data collection with embedded, predefined content
2. Wizards are conveniently categorized into logical solution groups
3. Each wizard has a list of descriptive tasks to help guide the user
4. Improves predictability with recommended practices
5. Assures corporate compliance based on survey questions, forms, and legacy data
6. Recognizes dependencies among build tasks

You will also have access to the complete START database content for the purposes of deploying the rapid implementation approach. The pre-built tables and forms facilitate database design and build, and help the continuity of testing repeatable processes.

We have utilized MethodM Online, Bedrock, and the START database content on projects of all scopes and sizes. These tools have proven to provide a reduced implementation time than those projects who do not utilize these tools.

As we encounter challenges during any aspect of a project, we develop strategies to minimize the risk and immediately incorporate those strategies into our implementation methodology. Cerner uses a best practice approach and we are consistently updating our lessons learned so that we can pass this information along to the next implementation. Cerner also has a team dedicated that analyzes the issues and problems that arise during implementations and then creates action plans around the documented challenges. This information is incorporated into the process to hopefully lessen the impact of that issue going forward.

(iv) Project Management Plan

Provide Proposer's process and standards followed for a Project Management Plan (PMP), pursuant to Section 1.1(d) (Project Management Plan) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 3 pages.

Schedule Management: The implementation events are scheduled out in advance, allowing time for County and Cerner to schedule the appropriate resources for each event. There is visibility to all major events from Project Kickoff to Conversion. The MethodM Online tool provides a calendar that shows the resource and events schedules. A project plan identifying the roles and tasks is included with our response as Attachment J-1.1(g).

Issues and Action items: Issues and actions taken on those issues are tracked in the MethodM Online tool. Issues may be entered by project team members and actions taken on those issues are documented in the tool. Issues are also tracked through our online service request tool, eService.

Cost Management: We are proposing a fixed fee model and, as such, the project will be managed based on the scope and timeline. In this model, the project will have a fixed scope and a fixed duration. If the project goes outside of the agreed-upon scope or duration, additional costs will apply. If Cerner is at fault, we are still responsible for delivering.

Staff Management: We have included the Client Guide to Cerner Roles and the Recommended Client Roles documents with our response. These documents identify the typical roles required for the project and the responsibilities for each role. You may refer to the Event Description Guide to identify which role is needed for each event throughout the implementation effort. The Project Management team has extensive experience with managing staff for complex projects. They are onsite every week and keep in constant communication with staff though meetings, structured events, status reporting and through MethodM. The MethodM project plan will alert the Project Manager and assigned staff to tasks that are due and have been completed.

Communications Management: Cerner will work with County to develop a Communications Plan. A sample plan is included with our response for your review. Cerner will be responsible for the following:

- Assist County in project identity and branding.
- Coach County on communication planning and auditing
- Determine key messages and content appropriate to stakeholder groups
- Determine inter-team communication strategies
- Analyze current communication channels, identify and leverage successful channels already in place, and define new channels required to support the initiative.

County will be responsible for the following:

- Create thorough communication plan to build individual and organizational commitment to execute the transformation journey.
- Identify and align communication vehicles, media, and messengers with project governance and operational leadership.
- Create communications grids for staging communication messages and events.
- Provide model for rolling editorial calendars for significant production work.

Configuration Management: Cerner will perform the build in the proposed implementation approach. Cerner will guide County in completing the necessary data collection materials and tools. Cerner uses the data from those materials tools to conduct the build. County participates in testing of the build to ensure all configurations meet County's expectations.

Risk Management: All project risks are track in our MethodM Online tool. Project team members may enter project risks directly in the tool. The information tied to each risk includes:

- Title of risk
- Owner of risk
- Assignment of risk
- Status of risk
- Category
- Due date

- Probability score
- Magnitude of impact should the risk actually happen
- Cost impact should the risk actually happen
- An exposure score will help prioritize the risks for the project so the project team is not managing to just the high impact or high probability risks. The exposure score equals the probability score times the impact score assigned to the risk.

Risk reports can be run for project management review and discussion.

Large organizations with multiple facilities have to agree on the overall EHR design and workflow. There must be executive leadership involvement in the project for any key decisions that result from differing opinions among representatives from different facilities.

There must be very good communication, and strong team cohesion around the vision and the mission.

The County has to ensure that the staffing that Cerner recommends for this project is available and that clinicians that are needed for the project have their positions back filled so they have time to participate.

Quality Management: The Quality Center is a Cerner Consulting Practice that performs build quality assessments for MethodM projects. The Quality Center, comprised of Testing Integration Architects and Test Analysts, engages closely with the project team during the testing cycles.

Change Management: In addition to the Change Management described in 2.4.1 (ii), we also follow a change management process as it relates to build and changes in the system.

The Cerner Millennium Health Information System includes several management and clinical information solutions integrated through a common architecture and data repository. As a result of the integrated nature of the Cerner system, it is critical that at the end of the paper Design Phase, strict Change Control procedures be enforced for the remaining implementation time and post Conversion. No changes should ever be made without first analyzing the impact of those changes. As such, the following Change Control Process should be rigidly adhered to by all staff.

Change Control is designed to ensure appropriate communication takes place, and to provide a formal process to request, assess, review, and approve changes to project elements. During the implementation, the Project Management Team is responsible for facilitating communication, with the objective of approving, disapproving or deferring requested changes. Post implementation the client will continue this process.

The intention of this policy is to define the steps and procedures required to present a Change Request to project management for approval. The steps are designed to ensure communication to, and sign off by, all affected departments regarding the nature of the request, impact assessment, and final decision.

Any Change Request that will result in a deviation in the agreed upon design, or additional code to be developed or loaded into the any of the secure BUILD/TRAIN/CERT/PROD environments will be analyzed through the Change Control Process outlined below.

Objectives:

- Ensure consistency in process of documenting change requests
- Define standards for reviewing requests
- Provide mechanism for impact assessment

- Determine necessary approvals needed for sign-off

- To document when change occurred, who executed the change and measures that were taken to ensure the change was successfully applied.

The process steps that will be utilized during the project are provided below.

1. The client identifies an issue or necessary change. They fill out the change request form, which includes an explanation of the need/issue, description/reference number, a proposed solution if known, and suggested integration points, which will be verified by the Cerner Solution Delivery Consultant (SDC).

2. The change request forms are collected and discussed during a weekly team meeting surrounding change control issues. Agenda items for this meeting will include prioritizing issues and discussing any points of integration. This meeting will determine whether these changes will be approved or not approved. It is an internal client meeting with the Cerner Integration Architect in attendance.

3. The approved change requests are tracked on the Change Request Log spreadsheet and then logged as a Service Request to the appropriate Cerner Solution Team via Navigator (our online service request tracking tool). After maintenance training, the Cerner SDC will notify the Client to make the Cerner approved changes.

4. Any additional costs, work effort, scope changes, or timeline impacts will be documented in the Service Request. The Cerner SDC will follow the escalation management process for such issues.

5. The Cerner SDC will communicate to the Client the resolution and the projected implementation timeframe.

6. The Cerner SDC or Client will institute the change in the appropriate environment (BUILD, CERT).

7. The Client Team Leader will be responsible for testing the change according to Unit/System/Integration validation standards laid down in the Test Plan.

8. Once tested, Cerner or Client will move the change to the appropriate domain. The Cerner SDC will follow the Production Environment Change Authorization (PECA) process if the change is needed in the production domain.

9. The Cerner SDC updates the issue/resolution on the SR. The Client updates the issue/resolution on the Change Request Log.

10. The Change Request Log is to be reviewed on a weekly basis by the Cerner Integration Architect and the Client.

11. The Client Team Leader will be responsible for informing the appropriate people regarding training issues, change updates to facility staff, as it relates to the completed change.

12. The Client will retain the paper Change Request forms, along with any supporting documentation, emails, or screen shots (before and after) as a record of change. The Change Request Log will be retained on SharePoint.

After live patient data is loaded into the production domain, any change made into this domain by a Cerner SDC will require a PECA. These changes can be encompassed into a daily blanket PECA, weekly blanket PECA, or individual PECA.

Cerner will work with your organization to adapt the ongoing change control process to meet your organization's needs. The Change Control Session is an event that will assist your organization with the creation or modification of the change control process that will be utilized during system validation and throughout the life of the system. The Change Control Session is a Cerner-lead

discussion performed directly after the System Validation Event. The goal of this event is to provide your organization with the Cerner recommended approach to Change Control and work alongside your team to create a process that is best for your organization.

(v) Data Conversion Plan

Provide Proposer's approach and components of a comprehensive Data Conversion Plan, pursuant to Section 1.1(e) (Data Conversion Plan) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

Our approach to data conversions includes the following phases:

- Design: Identifying what and how much history data needs to be loaded into Cerner Millennium.
- Build: Build the HL7 interfaces that will process the historical loads.
- Test: Run a sample extract from the foreign system and perform an upload test.
- Convert: Start data conversions one to six weeks prior to conversion, depending upon the number of conversions required.

Additional details regarding our approach for data conversions can be found in section 2.4.7 of this document.

The data conversions planned for phase one include: Master Patient Index/ADT, Historical Abstract Data, Historical Coded Data, Visit History/Encounter, Transcription, Mammography, Radiology Reports, Pharmacy Allergies, Pharmacy Immunization, Pharmacy Inpatient, and Clinical Repository/EMR.

The data conversions planned for phase two include: Master Patient Index/ADT, Anatomic Pathology, Blood Bank Transfusion, General Laboratory, Microbiology (discrete data), Microbiology (displayable text), and Human Leukocyte Antigen (HLA).

(vi) High-Level Project Schedule

Provide Proposer's high-level project schedule, pursuant to Section 1.1(f) (High-Level Project Schedule) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

Below is the high-level schedule for the overall project plan. A time chart depicting the schedule is included with our response as well as a collapsed view of a draft project plan. Note: These dates are estimates based on a contract execution date of June 1, 2012.

CONTRACT EXECUTION 6/4/12 -/8/12

STRATEGIC ASSESSMENT 7/9/12 -7/11/12

CLIENT EXECUTIVE SESSION 7/23/12- Fri 7/27/12

PROJECT PREPARATION 8/13/12-Fri 8/17/12

PROJECT KICKOFF 9/3/12- 9/7/12

SYSTEM REVIEW 10/8/12-10/12/12

DESIGN REVIEW 12/3/12- Fri 12/7/12

SYSTEM VALIDATION SESSION 1/21/13 -1/25/13

TRAINER AND CONVERSION PREP 3/4/13- 3/8/13

MAINTENANCE TRAINING 4/1/13- 4/5/13

INTEGRATION TESTING 1 4/29/13-Fri 5/3/13

INTEGRATION TESTING 2 5/27/13- 5/31/13

CONVERSION - Facility 1 and Rollout of Clinics in Cluster 1 (includes training) 7/8/13- 8/9/13

POST CONVERSION REVIEW Facility 1 Cluster 7/15/13- 7/19/13

POSSIBLE ICD10 PHASE (Could be removed based on uncertainty from Health and Human Services 8/5/13 -10/18/13

CONVERSION Facility 2 and Rollout of Clinics in Cluster 2 (includes training)10/28/13-2/21/14

POST CONVERSION REVIEW Facility 2 Cluster 3/24/14- 3/28/14

CONVERSION Facility 3 and Rollout of Clinics in Cluster 3 (includes training) 3/3/14- 6/20/14

POST CONVERSION REVIEW Facility 3 Cluster 7/21/14- /25/14

CONVERSION Facility 4 and Rollout of Clinics in Cluster 4 (includes training) 7/7/14- 8/22/14

POST CONVERSION REVIEW Facility 4 Cluster 9/22/14- 9/26/14

CONVERSION Facility 5 and Rollout of Clinics in Cluster 5 (includes training) 9/1/14- 2/19/14

POST CONVERSION REVIEW Cluster 5 1/19/15- 1/19/15

CONVERSION Facility 6 (includes training) 9/1/14- 12/19/14

POST CONVERSION REVIEW Facility 6 1/19/15- 1/23/15

(vii) Detailed Project Schedule

Provide Proposer's project schedule and resource plan, pursuant to Section 1.1(g) (Detailed Project Schedule) of Appendix J (Implementation Requirements), as "Attachment J-1.1(g) (Project Schedule)."

(viii) Staffing Plan

Provide Proposer's detailed staffing plan, pursuant to Section 1.1(h) (Staffing Plan) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page. Provide Proposer's Project organizational chart, separately as "Attachment J-1.1(h) (Proposer's Project Organizational Chart)."

A project organization chart is included with our response.

The following Cerner roles will be engaged:

- Client Results Executive

- Clinical Strategist
- Delivery Consultants
- Engagement Controller
- Senior Engagement Leader
- Engagement Leader
- Healthcare Executive
- Integration Architect
- Interface Architect
- Learning Consultant
- Software Architect
- Software Engineer
- Solution Architect
- Senior Scientist
- System Architect
- System Engineer
- System Engineer - FSI
- Technical Engagement Leader
- Test Engineer

The following County roles are recommended:

- Chief Executive Sponsor
- Chief Financial Officer
- Chief Information Officer
- Chief Medical Information Officer
- Chief Medical Officer
- Chief Nursing Information Officer
- Chief Nursing Officer
- Chief Quality Officer
- Clinical Leader for each discipline
- Director of Finance
- Director of IT
- Director of Quality/Compliance
- Meaningful User Project Manager
- Operations Leaders for HIM/Medical Records, Patient Accounting, Case Management, and Patient Management
- Process/Integration Architect

- Project Manager
- Technical Manager
- Physicians by discipline
- Transformation/Adoption Coordinator
- Education Coordinator
- Super users
- Desktop Technician
- Interface Manager
- Network Technician
- Operations Monitoring Specialist
- Peripherals Coordinator
- Analysts by discipline
- Communications Coordinator
- Analyst - Metrics and Reporting
- Subject Matter Experts by discipline

(ix) Benefits of Proposed Account and Project Organization

Describe in detail the benefits of Proposer's proposed account and project organization and the time frame for implementation, pursuant to Section 1.1(i) (Benefits of Proposed Account and Project Organization) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1/2 page.

As you will see from the Client Guide to Cerner Roles and the Guide to Recommended Client Roles documents, we utilize a variety of roles on both the Cerner and client side throughout our projects. The project leadership for both the client and Cerner teams is focused on the risks, benefits, and outcomes of the project, ensuring the scope and project plan remain on track to achieve the expected outcomes.

Each team member has specific and defined tasks and deliverables to achieve during the project. This approach allows those team members to remain focused and dedicated to their role in the project. Their responsibilities are clearly outlined and understood from the beginning of the project.

Our approach to resource utilization allows us to utilize the right resources at the right time throughout the project. We pull the necessary resources in for specific tasks and deliverables to ensure we are using both the client and Cerner resource time efficiently. This approach ensures your organization access to our solution experts at the appropriate time for your project.

2.4.2 CONTRACTOR KEY PERSONNEL

(i) Contractor Project Manager

Identify and provide Proposer's key skills and qualifications for the Contractor Project Director, pursuant to Section 1.2 (Contractor Project Director) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

The Senior Engagement Leader is responsible for working with County to develop and communicate the program strategy, direction, changes, and project plan. Additionally, this associate manages the day-to-day activities of the project for Cerner. The Senior Engagement Leader works to obtain the necessary resources to support the project and manage service delivery.

Responsibilities:

- Leading project implementation planning
- Developing global work plan and schedules, developing or delegating and monitoring development of product implementation work plans, where appropriate
- Planning and evaluating contracted project service delivery and cost management
- Identifying and managing risk and quality assurance issues which arise during the project
- Reviewing project progress regularly with Client and Cerner management
- Organizing and day to day oversight of the Cerner Project Team
- Coordinating Cerner project resources and other Cerner support groups and resolving resource conflicts as needed
- Monitoring overall project progress and milestone
- Monitoring project budget from a cost and time perspective
- Ensuring project compliance with contract and Cerner quality assurance standards
- Attending Project Management Office meetings
- Managing issue escalation and resolution
- Complete Cerner Consulting standard status reports and Event Activity Reports
- Own all technical tasks including domain creation and technical staffing. These activities should be coordinated through the Technical Engagement Leader
- Other tasks as needed by the project

(ii) Contractor Project Manager

Identify and provide Proposer's key skills and qualifications for the Contractor Project Manager, pursuant to Section 1.2 (Contractor Project Manager) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

The Engagement Leader manages the day-to-day activities of the project for Cerner. The Engagement Leader works to obtain the necessary resources to support the project and manage service delivery.

Responsibilities:

- Leading project implementation planning
- Developing global work plan and schedules, developing or delegating and monitoring development of product implementation work plans, where appropriate
- Planning and evaluating contracted project service delivery and cost management
- Identifying and managing risk and quality assurance issues which arise during the project
- Reviewing project progress regularly with Client and Cerner management

- Organizing and day to day oversight of the Cerner Project Team
- Coordinating Cerner project resources and other Cerner support groups and resolving resource conflicts as needed
- Monitoring overall project progress and milestone
- Monitoring project budget from a cost and time perspective
- Ensuring project compliance with contract and Cerner quality assurance standards
- Attending Project Management Office meetings
- Managing issue escalation and resolution
- Complete Cerner Consulting standard status reports and Event Activity Reports
- Own all technical tasks including domain creation and technical staffing. These activities should be coordinated through the Technical Engagement Leader
- Other tasks as needed by the project

(iii) Technical Lead

Identify and provide Proposer's key skills and qualifications for the Technical Lead, pursuant to Section 1.2 (Technical Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

The Integration Architect (IA) works across multiple solutions and interacts with the Client throughout multiple project phases. They are involved in scope decisions, process assessment, design and build, testing, training and delivering business results. This role identifies key application integration points that may affect design decisions and supports the management of domain strategies, change management and control, and issue management. They function as the application team lead for the Cerner project team and provide associate mentoring and coaching.

Responsibilities

- Serve as the integration expert across solutions and interfaces providing troubleshooting and process expertise
- Assist with the development of implementation strategies and work plans
- Support environment/domain planning and management including regression testing after code installs, domain copies, reference data domain synchs (RDDS), and activity deletes
- Ensure design decisions include considerations across solutions and fall within scope
- Maintain responsibility for Distribution Package analysis and installation
- Mentor and coach project team members
- Drive the system validation process and provide guidelines for all levels of implementation testing
- Assist client in developing appropriate policies and procedures for issue management and change control
- Monitor Cerner Navigator (eService) for integration points and ensure all issues are getting resolved in a timely fashion
- Provide leadership for Integration Testing, Reference Data Domain Sync (RDDS), and Conversion

Readiness

- Assist with peripheral implementation strategy
- Attending Project Management Office meetings
- Other tasks as needed by the project

(iv) Functional Lead

Identify and provide Proposer's key skills and qualifications for the Functional Lead, pursuant to Section 1.2 (Functional Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

The Solution Architect is responsible for providing Cerner solution expertise needed for successful product implementation at a Client site. The Solution Architect is heavily involved in the design process to ensure recommended practices are utilized.

Responsibilities

- Provide solution expertise to Cerner project team members, as needed
- Serve as source for Recommended Practices, both Clinical and Implementation
- Work with Project Team to identify project risks and provide resolution
- Conduct client Current State Analysis and Scope Review Sessions at client facility during Project Kickoff event
- Work to evaluate associate progress and capabilities, build status, and project staffing when necessary
- Review Conversion Readiness Assessment and provide feedback to Delivery Consultants
- Conducts QA Checkpoints after Design Review, Trainer and Conversion Preparation and Integration Testing
- Conduct Post-conversion Assessment providing feedback to client and appropriate Cerner organizations and/or individuals
- Other tasks as needed by the project

(v) EHR Subject Matter Expert

Identify and provide Proposer's key skills and qualifications for the EHR Subject Matter Experts, pursuant to Section 1.2 (EHR Subject Matter Experts) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

Responsible for providing Cerner solution expertise needed for successful product implementation at a Client site. The Delivery Consultant may belong to one or more teams and works with project leadership to coordinate his/her activities with other members of the team(s). The Delivery Consultant is the primary contact for the client's solution troubleshooting and consultation.

Responsibilities

- Implementing solution design decisions; tailoring application database to meet the unique requirements of the department and Client institution

- Assisting in testing system functionality as well as validating database integrity
- Providing consultation on process design
- Providing product specific help to departmental/functional team leaders
- Instructing Client on database build tools
- Helping plan and organize Client train the trainer and end user training
- Assisting in the development, management and execution of application and medical device and foreign system interface testing
- Providing on site conversion support
- Investigating/resolving application problems
- Escalating major application or systems issues to appropriate Project Team members
- Working closely with the Integration Architect to coordinate/resolve cross department design and implementation issues
- Coordinate client calls and supporting documentation
- Meet build and test completion targets for project
- Complete and own the Conversion Readiness Assessment process. Review it with the client during Trainer and Conversion Preparation and Integration Testing
- Effectively communicate solution knowledge, clinical process, progress, status, and resolution to all involved parties
- Other tasks as needed by the project

(vi) Transition/Deployment Lead

Identify and provide Proposer's key skills and qualifications for the Transition/Deployment Lead, pursuant to Section 1.2 (Transition/Deployment Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

The responsibilities for the Transition/Deployment Lead are split among the Contractor roles of Integration Architect and Clinical Strategist.

(vii) Conversion and Interface Lead

Identify and provide Proposer's key skills and qualifications for the Conversion and Interface Lead, pursuant to Section 1.2 (Conversion and Interface Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

The responsibilities for the Conversion and Interface Lead are split between the Interface Architect and the Engagement Controller.

The Interface Architect is responsible for working with counterparts from Cerner, Client and other suppliers to ensure effective and efficient system integration is accomplished.

Responsibilities

- Develop interface specifications for system level interfaces

- Reviewing architecture design for all interfaces
- Helping Client personnel design environment management, operational procedures, interfaces, and other "system" software
- Acting as the escalation point for interface issues that arise at Client site
- Providing technology support for testing and conversion activities

The Engagement Controller role is a key component to the Engagement Management team. This role provides critical project management tasks for the project to insure project execution is on schedule, under budget, and within the planned scope. They support the Cerner Engagement Management team by having a detailed view of project summary and progress.

Responsibilities

- Coordinates event preparations by solidify resources, creates agendas and reserves training rooms
- Supports Engagement Management team with issue escalation
- Support environment/domain planning and management including regression testing after code installs, domain copies, reference data domain synchs (RDDS), and activity deletes
- Monitors the Scope Management Process
- Lead and document checkpoint meetings during events and document wrap-ups
- Monitor session leaders Visit Summaries for consistency and accuracy after each event
- Monitor the client's Integration Testing issues list and escalate as necessary
- Monitor the client's conversion readiness assessments
- Monitor Cerner Navigator (eService) for integration points and ensure all issues are getting resolved in a timely fashion
- Reviews Client Satisfaction Surveys and provides feedback to Cerner Engagement Management team
- Other tasks as needed by the project

(viii) Training Lead

Identify and provide Proposer's key skills and qualifications for the Training Lead, pursuant to Section 1.2 (Training Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

The Learning Consultant (LC) is a liaison between KnowledgeWorks, the Cerner project team and Client's project team, stakeholders and end users. Individuals in this role have a strong understanding of learning theory and are able to analyze large amounts of data to create both detail-level and strategic-level plans. The Learning Consultant strives to create both executive-level and individual buy-in to the learning plan. They can also supplement Client's education/training team or provide complete outsourcing solutions.

As part of our standard proposal, Cerner Learning Consultant will provide the following services

- Conducting learning needs assessments

- Assisting in development of learning strategy

The following additional servies are not part of our standard contract but can be provided by a Cerner Learning consultant:

- Developing End-user learning tools (e.g., job aides, workbooks, etc.)
- Assisting Client in developing course scheduling, registration and participant tracking procedures, if these learning administration systems are not available
- Recommending training facility changes needed in order to meet Client's objectives
- Coordinating Client IS team class enrollment
- Investigating end user solutions (i.e. CBT)
- Coordinating additional training outside of contract
- Providing physician training
- Conducting/proctoring end user training
- Supporting end users during First Productive Use (conversion) support

(ix) Organizational Change Management Lead

Identify and provide Proposer's key skills and qualifications for the Organizational Change Management Lead, pursuant to Section 1.2 (Organizational and Change Management Lead) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to a 1/2 page.

The Clinical Strategist is the Cerner counterpart to the Client Transformation coordinator and works with the Executive Sponsor, Physician Champion, Project Manager and other Client leaders to develop and implement strategies to manage the organizational change associated with system implementation. Change management activities include data gathering and analysis, change planning, coaching, measurement planning, and developing clinician engagement and adoption strategies.

Responsibilities

- Works with Client and Project leadership to develop a comprehensive plan for organizational transformation and coordinating that plan with all other Cerner system project activities
- Assists Cerner and Client project leadership in profiling and risk analysis
- Supports organizational kick-off events
- Works with the Communications Team Lead to identify key stakeholder groups and ensure the communication strategy meets their information needs
- Works with operational and clinical leadership to develop and implement a clinician engagement strategy
- Facilitates gap analysis and change management activities including job impact analysis and policy/procedure analysis
- Supports business case development and on-going benefits measurement
- Serves as the PMO subject matter expert on organizational culture and processes

- Works with Education Coordinator to ensure learning plan is responsive to the various learning needs and styles of the client
- Identifies and manage risks and change-related issues that arise during the project
- Reviews project progress regularly with Client and Cerner management
- Other tasks as needed by the project

(x) Additional Contractor Key Personnel

Identify and indicate additional Contractor Key Personnel project role(s) and responsibilities proposed by Contractor. Proposer's response for this Section is limited to 1 page.

The main role of the Client Results Executive (CRE) is to provide guidance around project planning, project scope, risk management, and professional service deployment. The Client Results Executive serves as the Cerner Senior Executive for escalation of project related issues and client satisfaction.

Responsibilities:

- Maintains executive relationships with senior Client management
- Provides the connection and thought leadership between the client's business strategies and Cerner's core values proposition
- Participate in monthly Project Reviews with project leadership
- Overseeing accounts for risk assessment, executive satisfaction, and project status
- Works with Project Manager and Engagement Leader on project implementation planning
- Planning and evaluating contracted project service delivery and cost management
- Attending EMR Steering Committee and Project Management Office meetings
- Procuring and managing resources to meet contracted project plan deliverables
- Works with senior Client management to address strategic project related issues, scope, solution, timing, staffing, organizational impact, communications, business process transformation vis-à-vis solution design and capability
- Serves as the Cerner person responsible for escalation of project related issues, service delivery and Client satisfaction
- Responsible for making contractual agreements and commitments on behalf of Cerner Corporation
- Participates in analysis of processes, procedures, and outcomes to seek continuous improvement of assigned projects
- Provides feedback mechanism back into Cerner to improve its processes, procedures and solution for the purpose of building improved levels of ongoing Client satisfaction
- Ensuring the efficiency of the professional services business by monitoring appropriate metrics and adjusting practices accordingly
- Responsible for maintaining quality and consistency of solution and professional services delivered to Client
- Acts as Client advocate to Cerner's engineering, solution support, technology services, consulting

services, executive management and other groups

- Responsible for Cerner Corporation's project performance
- Other tasks as needed by the project

Healthcare Executive: The Cerner Physician Executive serves as the liaison to the Client, medical staff and project leadership. Responsibilities:

- Providing expert consultation to Client physician leadership to facilitate implementation
- Providing training and expertise for the Physician Champions
- Sharing physician experiences from other client sites
- Setting physician expectations on long and short-term system plans and capabilities
- Providing expertise in leveraging EMR to improve care delivery
- Attends Physician Advisory Group meetings, upon request

Additional roles are provided in the Client Guide to Cerner Roles document located in the Additional Reference Materials section

2.4.3 COUNTY ROLES

Describe any roles County executives and County employees are expected to fill, pursuant to Section 1.3 (County Roles) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 3/4 page.

Executive Leadership: The client executive leadership team commissions the project by allocating funds, providing ongoing support to the project sponsors, setting clear direction and expectations at the project's onset. They also provide ongoing support for the client project team. Their involvement will be great in the beginning and end phases of the project.

Clinical / Operations Leader: Clinical and Operations leaders are Director or sometimes Manager level people who provide departmental support and guidance throughout the project.

Project Manager: The Project Manager manages the overall implementation effort for the Client. The Project Manager works with the Executive Leadership Team and Project Management Office to obtain the necessary resources to support the project and manage organizational change required achieving project objectives and realizing benefits.

Physician Champions: The role of the Physician Champion is a unique and vital one. They are charged with positively influencing the other physicians to participate in and embrace the technical and operational changes that will result from the deployment of the Cerner system. Characteristics to be exhibited by the Physician Champion include: availability and willingness to participate, enthusiasm for the organization and project, comfort with technology, and, most importantly, the respect of his or her fellow physicians and clinicians.

Transformation/Adoption Coordinator: The Transformation/Adoption Coordinator works with the Executive Sponsor, Physician Champions, Project Manager and other Client leaders to develop and implement strategies to manage the organizational change associated with system implementation. The individual performing this role should have significant work experience in clinical practice and be a respected member of the organization's management team. The Clinical Adoption Coordinator

reports to the Executive Leadership Team. This role is most effective when aligned with clinical operations instead of the IT department.

Education and Learning: The Education and Learning Team works under the direction of the Education Coordinator. It is accountable for adapting the Learning Plan and delivering training to end users.

Education Coordinator: The Education Coordinator develops the Client's training plan for Super User and End User Training in conjunction with Project leadership.

Technical Team: Technical roles vary depending on the hosting strategy (Remote Hosted vs. Client Hosted) Cerner has proposed a Remote Hosted model.

Additional Roles and more detailed descriptions are provided in the Guide to Recommended Client Roles document located in the Additional Reference Materials section.

2.4.4 KNOWLEDGE TRANSFER APPROACH

Provide Proposer's knowledge transfer approach that it will employ for its project approach, pursuant to Section 1.4 (Knowledge Transfer Approach) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

Based on our years of experience, Cerner has developed a client build process titled MethodM. Within each stage of the process, key stakeholders have identified tasks and responsibilities which are tracked on a web-based tool. Simultaneously, project team members are provided the training necessary to complete each task thereby learning the system within its context. Cerner believes that adherence to the MethodM process will produce a knowledgeable project team and a completed system which reflects the goals of the client organization. As part of the MethodM process, the project team will also receive two formal classes which provide the foundation for their training. Millennium Fundamentals is conducted at the beginning of the project and Architecture, Troubleshooting and Issue Management is conducted in the Launch phase of MethodM.

MethodM Overview

Vision Stage: Provides the tools to identify the goals of the client and determine how Cerner will partner with the client to reach those goals.

Engage Stage: Process of bringing together the project team players for the activities and tasks that will prepare them to assume their project roles and responsibilities.

Configure Stage: The events and activities that move the client's project toward the launch phase, leading to the realization of the system value. It includes designing, building and testing activities.

Launch Stage: Final steps of preparation necessary to bring the client's solution to life in their everyday operations.

Enhance Stage: Review for improvement opportunities, optimization opportunities, an evaluation of the success of the project, and evaluation of benefits measurements and their progress toward target goals.

Transform Stage: Helps position clients to take their healthcare organization to another level.

Post conversion, the project team is encouraged to continue their training by accessing the complete catalog of continuing education courses offered for each Millennium Solution. Over 100 courses encompass solution-specific and technical curricula offered in Kansas City, client site, regional

locations, and virtual. The annual Cerner Health Conference offers more than 200 accredited education workshops.

The typical challenges to achieving successful knowledge transfer center around resource availability and end-user preparation. It is critical that staff is available to actively engage in the project sessions and formal classes when they are held. Additional, super –user participation is important throughout the entire project. Great attention must be placed on event specific training.

It is important that County develops contingency plans to cover project team responsibilities should certain resources not be available for various sessions. Cerner also recommends County assign an Education Coordinator to plan and manage the organization's end-user education and training.

We will work with County to ensure the approach in place will meet the needs of County and will achieve the expected outcomes. As we proceed further in the selection process, we will discuss any special needs of the County and how to adjust our approach as necessary. Some clients elect to engage a Cerner Learning Services Consultant for the purpose of coordinating education events.

2.4.5 TRAINING

Provide Proposer's training approach for the EHR project, pursuant to Section 1.5 (Training) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Cerner Learning Services offers a full spectrum of learning solutions and consulting services to address implementation education and adoption, as well as end-user training needs. These strategies are developed from our most successful best practices and are delivered by experienced learning consultants and educators who intimately understand Cerner Millennium and offer expertise in instructional design, adult education theory, and clinical workflow.

Cerner Millennium project team and technical personnel can chose from a comprehensive solution and technical curricula to help them effectively design, build, maintain, and troubleshoot Cerner solutions. Those who desire deeper solution or IT knowledge can complete the Cerner Millennium Certificate program.

For end-user training, Cerner utilizes a blended learning approach that includes a combination of WBTs, instructor-led training, activities performed in a training domain, and job aids. The specific needs of end users and the organization drive the mix of components involved in the blended learning approach and combine a variety of learning methodologies to minimize time to competency.

We will work with County to determine the specific needs of your organization. The Leading Strategic Change Workshop is an on-site working session co-facilitated by one learning consultant and a clinical strategist and results in the development of a behavior change campaign, learning plan and education roadmap that details the client's approach to their end-user learning and adoption. The first day of the workshop will guide you through the process of introducing and managing change in your organization. In the second day of the workshop you will identify learning goals and create a learning plan for your organization.

Additional preparation for end-user training is addressed during the Trainer and Conversion Preparation Event. During this event, the client project team will deliver application demonstrations to the Cerner team to ensure they have the ability to use the Cerner system to facilitate department

workflow effectively. Once this is complete, the client has the option of utilizing their project team members to deliver training to the trainers in order to minimize costs. Alternatively, Cerner Learning Services can be contracted to deliver Train-the-Trainer sessions, including workshops covering effective facilitation and training skills.

Cerner's approach to training can be simply summarized: to get people competent, quickly. It is important that an educational strategy reach across phases and beyond Millennium implementations. Cerner recommends that clients adopt a Learning Forward TM approach to education and learning with relation to their Millennium solutions. A Learning Forward approach is rooted in the idea that learning and education should be viewed as an ongoing process as opposed to a one-time event (preparation for go-live). Central to that thought is that educational content and delivery mediums should be created in a form that can be utilized to continuously improve the performance of the people building and supporting the system as well as the providers utilizing the system to deliver care well beyond the event of "go-live".

Cerner recommends that client incorporate all of the approaches described below. The extent to which each tool will be utilized will be solidified during the Leading Strategic Change workshop.

Informal Education: Job Aids; LearningLIVE (Quoted in RFP) Description below

Coached Learning: Computer learning labs. Description in "vi" below; Practice Scenarios. Description below; Conversion coaches; LearningLIVE

Formal Learning: Web-based courses (Standard WBTs quoted in RFP); Computer learning labs; Practice Scenarios; Instructor-led training classes

Comprehensive: Instructor led training classes provides the opportunity to train end users on every aspect of their new system workflow and functionality. Cerner recommends that instructor-led training classes only include that workflow that is core to the end user; Practice Scenarios provide the client the opportunity to develop a practice scenario that is specific and comprehensive to each specific role.

Innovative: LearningLIVE tool – see below

Cost Effective: LearningLIVE reduces the need for additional super users to be on the floor post conversion. A reduction to Help Desk calls may be experienced as a result of end users accessing LearningLIVE as their first point of support; Computer Learning Labs provide many end users, the opportunity to consume their training and validate competency without having to attend a lengthy formal classroom event.

Post Conversion Training - After Go-Live completion, new training needs arise such as documentation of best practices, learning materials maintenance, new hire training, advanced role-based training, and refresher training for project team members, Cerner has a complete catalog of continuing education courses offered for each Millennium Solution. Over 100 courses encompass solution-specific and technical curricula offered in multiple locations and virtual. The annual Cerner Health Conference offers more than 200 accredited education workshops.

For end users, client will continue to utilize the standard WBTs and developed classroom materials to support new hire orientation. Cerner recommends, and has included in this quote, a tool to deliver just-in-time learning at the point-of-need. LearningLIVE™ offers clinicians relevant learning resources in the context of their workflow. Available within PowerChart®, LearningLIVE™ is accessible from the organizer and patient's chart. By offering a searchable collection of resources, it provides clinicians with the opportunity to seek and apply knowledge in real time, thus reducing the time to competency. The flexible design facilitates dynamic delivery and quick-turn updates,

allowing the organization to disseminate knowledge in real-time. LearningLIVE supports long-term use and expansion of learning content. The creation of customized dashboards provides the education team with data to apply training to areas of deficiency.

Quoted in RFP: Implementation of LearningLIVE solution tool within PowerChart; Development of one clinical and one provider focused LearningLIVE page; Knowledge transfer of how to update the LearningLIVE views, dashboards, and asset development; Development of initial 20 custom assets

Cerner recommends that clients train one super user for every twenty end users for each solution. Cerner recommends that super users, as much as possible, include project team members. There are specific tasks that super users may be asked to perform as part of their role. It is important to note that every super user will not perform every task defined in Attachment XX

End Users participation begins with the delivery of training. Our experience has shown that clients who present a strong communication and marketing plan outlining the benefits of the upcoming conversion, have end users who are anxious and willing to learn their new tasks. Cerner recommends that all end users complete the client training program and pass a competency assessment prior to being assigned password and logon credentials. Post conversion, end users should be encouraged to share their concerns and suggestions for potential system upgrades.

Methods, tools, and types of training

Electronic learning strategy and eLearning creation: Cerner recommends the use of web-based training solutions (WBTs) as the first training point for all end users. The WBTs allows all end users to advance through a course at their own pace. In addition, the WBTs provide a ready source of reference post conversion.

Quoted in RFP: All standard WBTs appropriate for the solutions described in this RFP. Phase I/Ia WBTs will be available to end users for a period of 36 months; Phase II WBTs will be made available to end users for a period of 12 months.; Cerner will provide client the ability to run WBT completion reports.; All standard WBTs will reside on Cerner servers with access via internet.

Many organizations choose to develop customized WBTs to more fully reflect their specific workflow processes. By customizing electronic materials, organizations create relevant training tools that can be utilized as part of their overall training strategy. All custom WBTs have the ability to reside on a County server in Los Angeles. If desired, Cerner will provide proposals to develop custom WBTs for your organization.

TRAIN domain strategy and maintenance: A TRAIN domain is used primarily in instructor-led training and extra-curricular practice. It is important that the domain's use be considered in its population and ongoing maintenance. Cerner recommends that clients create scripts to ensure their TRAIN data is fresh so that instructor-led training utilizes relevant data that replicates system use for delivery of care. Cerner has developed automated tools to assist in this process and will provide quote if desired.

RFP Assumptions: Client will develop and load to TRAIN domain all patient data sets to support end user training.

Paper Learning Materials Development: End User training materials typically include a role or application-specific facilitator guide, participant guide, performance-based assessment, and supporting materials such as job aids. Cerner provides a complete reference library of content for our clients to use in the development of their learning materials. All content, located on UCern, may be downloaded and edited for client use. These reference guides become the foundation for the client to develop workflow specific training materials for each role impacted by the EMR conversion.

At the completion of the end user training, performance assessments become the initial measurement of competency.

Quoted in RFP: Full access to UCern reference library of materials for each solution.

If desired, Cerner will provide a proposal to develop all role based end user training materials delivered as a live source file.

LearningLIVE™ See description in above.

Practice Scenarios: See description above

Computer Learning Labs: A Learning lab is a training room that is staffed with one or more client trainers during specified hours. Cerner recommends that the learning lab be open and staffed six weeks prior to conversion. The Learning Lab serves several functions: End users may come to the learning lab and complete their WBTs; End users will come to the learning lab and complete their practice scenarios for competency validation; In the example of a CPOE conversion, one week before conversion, we encourage physicians to drop into the learning lab to obtain assistance in developing their "favorites" and "macros" in the live environment.

Training Tools Pros and Cons

Web based training (WBT) Pros: Easy access; Flexibility of use; Can be accessed anytime, anywhere; Promotes consistency of content to all end users.

Web based training Cons: Standard WBTs do not reflect client workflow process; Standard WBTs are not role based; No person in attendance to provide support or ask questions; Cons can be eliminated by using custom developed WBTs

Instructor-Led Classroom Training Pros: Focused training with Individual attention to the end user; Consistency in the delivery of content to end user; Department workflow changes can be addressed.

Instructor-Led Classroom Training Cons: Costs associated with end user time and backfill costs; Individuals cannot train at their own pace; Fatigue of end users attending class after completion of shift.

Computer Learning Lab Pros: End users learn at their own pace and supports independent learners; Less resource intensive than formal classroom training; Multiple opportunities for practice which improves retention

Computer Learning Lab Cons: Requires additional devices which may not be 100% utilized; No immediate feedback for questions; Challenging to track attendance.

Sample of training materials are found in Attachment XXX

Cerner recommended best practices for instructor-led end user training: Training not to begin earlier than five to six weeks prior to conversion; Training class should not exceed 12 participants; Performance assessments should be completed in the TRAIN domain at the end of class to demonstrate competency; Class instruction times will vary depending upon role and impact of solutions.

Sample class times: Registration staff: 4 hours; Radiology techs: 4 hours; Ambulatory clinic Nursing: 8 hours; General Nursing: 8-16 hours; Physicians: 8 hours total. Cerner recommends that alternative methods for training physicians to include staffing physician lounges with trainers for the three weeks prior to go-live; schedule one-on-one time with influential physicians during the three weeks prior to go-live.

Additional education (above MethodM) encouraged for technical and functional staff.

Analysts: Millennium Fundamentals (Quoted in RFP); Architecture, Troubleshooting and Issue Management (Quoted in RFP); Building and Maintain course for each solution the analyst has oversight. Example: Building and Maintain Documentation Management; Building and Maintaining Order Management; Standard WBTs for each solution the analyst has oversight. (Quoted in RFP)

Technical staff: Millennium Fundamentals (Quoted in RFP); Architecture, Troubleshooting and Issue Management (Quoted in RFP); Discern Explorer 1, 2, and 3; Discern Analytics Overview; Open Port – those who are responsible for interfaces; Open Engine – those who are responsible for interfaces.

2.4.6 REQUIREMENTS, DESIGN, CONFIGURATION AND CUSTOMIZATION

Provide Proposer's proposed system design, development and testing approach for the EHR project, pursuant to Section 1.6 (Requirements, Design, Configuration and Customization) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Project Preparation Session: The Project Preparation Session is targeted at delivering knowledge transfer to the client project team and other critical client participants to prepare them for their Cerner implementation.

Project Kickoff: The Project Kickoff event consists of three distinct activities: The Project Kickoff presentation, which is an opportunity for the Client Executives and Project Leadership to create enthusiasm for the project; the kickoff is akin to a pep rally in honor of the project's beginning. Additionally, during the Project Kickoff event, the Current State Assessment is conducted, which reviews client's current workflow and processes. This identifies both workflow risks and opportunities relative to Cerner's recommended workflows. The Scope Review Sessions is an opportunity to provide one final review of the scope document to ensure collective agreement regarding what will be implemented.

System Review: The System Review Event provides a guided overview of the solution relative to Cerner recommended workflow and introduces clients to and/or continues the support of the client in data collection activities. This event provides a guided overview of the solution and the concept of workflow. It introduces and supports the client in data collection activities that will be assigned to them to complete.

Design Review: The Design Review event provides a review of recommended workflow and begins the final processes in client data collection activities and their design decisions for their new system. During Design Review, system design and build are also validated for accuracy. Additionally, during this event the Learning Plan Development Session is conducted, working with clients to outline a plan for identifying and meeting their unique learning needs.

System Validation Session: This one-week session focuses primarily on two areas; first, to further familiarizing the client with the applications to confirm system design and to help them learn more about how to use the system and second, to prepare the client to be able to test their system effectively using test scripts they will develop. Over the course of the implementation, the system

will be thoroughly tested. Testing includes unit, functional, and integration testing. There are at least two rounds of integration testing that occur during the project. Detailed information regarding testing is provided in section 2.4.9 System Testing.

Trainer and Conversion Preparation: The Trainer and Conversion Preparation event is the portal for transitioning complete system ownership from Cerner to the client. With Cerner's guidance, Client Project Team members will use the provided demo scripts to complete application demos to the project team. The learning plan is validated and finalized, along with the Integration Test plan and Integration Testing Readiness. Conversion planning is officially kicked off during this event.

Maintenance Training: The primary focus of Maintenance Training is to transfer knowledge of how to perform updates to the client system using the database build tools. The emphasis of this session is on common maintenance activities, not design and build. After this session, the client is equipped to make modifications to the reference database. This event is specific to a Cerner Build project.

Integration Testing: Integration testing allows for validation of a complete integrated system build. It incorporates validating a day in the life of a patient across systems, departments, and workflow processes.

Conversion: Licensed solutions are moved to production use.

Post Conversion Review: The Post Conversion Review focuses on solution and workflow analysis and assesses end user satisfaction, current utilization of the implemented solutions, and the accompanying workflow. The Executive Summary will include recommendations for optimizing use of the system and potential design enhancements, based on interviews and observations conducted and data points gathered. The Executive Summary will facilitate and enhance the ability to plan next phases of automation.

2.4.7 DATA CONVERSIONS

Provide Proposer's proposed data conversion methodology for the EHR project, pursuant to Section 1.7 (Data Conversions) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 2 pages.

The history upload process includes the following steps:

Design

- Identify what activity history is going to be loaded into Cerner Millennium.
- Determine if it is possible to extract the data from the current system.
- Participate in a Cerner Millennium spec meeting to review the Universal Interface specs and map data from the current system to Cerner Millennium Universal Interface data elements.
- Determine if the information will go through a TCP/IP socket feed or if it will be provided in files.
- Identify a process for doing catch-up data. This will involve either capturing triggers real-time for

changes, or having the ability to run the extract and only pull new or updated information.

- Decide how much history data needs to be brought forward. This will include identifying legal requirements for maintaining historical data, and may involve alternative solutions for data that is not going to be loaded into Cerner Millennium.
- Document the outcomes from the spec meeting.

Build

- Contract for the extract of the data and mapping into the Universal Interface HL7 specifications.
- Provide formatted sample transactions to the Cerner System Engineer for FSI. The System Engineer will review the transactions for appropriate formatting and report back on any changes that are needed.
- Provide a list of the possible values for any coded data elements that are going to Cerner Millennium. Crosswalk information may also be required.
- The crosswalk information will be built into the Cerner Millennium database.

Test

- The client will then run a sample extract from the foreign system and provide the data to the Cerner System Engineer for an upload test. This step is to ensure the data will post into the Cerner Millennium database.
- Client should review the sample data in Cerner Millennium to validate that the information was posted correctly.
- Integration testing should include using some of historical upload samples.
- A volume test will be performed after the first integration test to set expectations of total time needed, adjust the size of tablespaces used in the database, and to performance tune the system for the historical load.

Convert

- Depending on total volume, the history loads will be started 1-6 weeks prior to conversion.
- Ideally, the included history data will be completed prior to conversion. In some instances, it may be necessary to continue feeding history after conversion.

Typical challenges include getting the other vendor to commit dedicated resources to the project. Another challenge would be extracting data from systems that are not able to use HL7 or other common standards. The most effective way to address the challenges is to get all necessary vendors involved early in the data conversion plan, especially if the data will be extracted in a non-standard format.

Cerner has extensive experience working with clients and other systems. Our engineers use a methodology which incorporates the learning we've gathered over time. We continually update the methodology to ensure that we take advantage of our recent experience and leverage the learning gained from each new challenge across all team members.

Data conversion work is typically handled directly in the system. Instances requiring additional tools outside of connecting to the sending system typically only come into play when the sending format for the data is non-standard.

2.4.8 QUALITY CONTROL PLAN

Provide Proposer's comprehensive Quality Control Plan, pursuant to Section 1.8 (Quality Assurance) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 3 pages.

Quality Center Overview

Vision: To deliver quality implementations to our clients and provide measurable outcomes for tracking improvement of design and build

Mission: To ensure Cerner implementations meet the requirements of each client's design and build and achieve uniformity in the delivery of systems

The Quality Center is made up of experienced testing coordinators and analysts who ensure objectivity when completing testing of your database. Solution Architects and Delivery Consultants are engaged to understand process and localized build that may reside outside of our testing plan.

Validation Strategy

Purpose: To systematically verify and document, prior to conversion, the functionality of software, integrity of data and compatibility with business processes within all Cerner Millennium® applications to be utilized.

Objectives: To plan and organize tests, review the expected outcome against the actual outcome, and revise/update future test scenarios based on feedback from the Cerner Team Leaders.

The Quality Center will assist with the following areas in the following types of testing:

- Build Quality Assessments
- Design Quality Assessments
- Internal Integration testing

Roles and Responsibilities

Quality Center Testing Coordinator:

- Oversees localization of the test plans..
- Manages automated and manual testing runs.
- Sends testing progress and results.
- Conducts Testing Review with Cerner Project Manager.

Quality Center Test Analysts:

- Execute manual testing.
- Record Pass/Fails and document issues.

Cerner Project Manager:

- Works directly with Cerner Testing Coordinator to:
- Plan Testing strategy/timeline.

- Participate in testing progress and results communications.

Solution Architect/Delivery Consultant:

- Review Bedrock reports.
- Help client localize unit test plan and system testing scripts.
- Review testing results and resolve issues.

Validation Phases

Build Quality Assessments: Build Quality Assessments ensure that the data provided in Bedrock wizards and in the Data Collection Workbooks is functioning correctly and is built accurately in the system.

Design Quality Assessments: Design Quality Assessments ensure that the system configuration meets Cerner recommendations and the client's workflow requirements, per the client-defined system testing scripts.

Internal Integration testing: Internal Integration testing is completed by the Cerner project team and facilitated by the Testing Coordinator in order to fully prepare for the onsite Integration testing events. This allows the Cerner project team to resolve build-related issues prior to the event.

Methodology

Quality Assessments: Prior to the Unit and Functional Testing phases, the Unit Test Plan is posted to client's MethodM > Project Documents site for the Cerner project team (Solution Architects and Delivery Consultants) to communicate build readiness for testing.

The Unit Test Plan includes the following information:

- Solution
- Deliverable
- Build Items
- Audit/Testing Steps & Additional Front-End testing (if applicable)

The Cerner project team is responsible for indicating the following information in the Unit Test Plan:

- Is the build item included in the client's design?
- If the build is included in the client's design, is it ready to be tested?
- Is an up-to-date DCW on MethodM>Project Deliverables?
- Additional Testing Comments

The Unit Test Plan references unit test scripts that are utilized by the Quality Center to perform testing. Unit test scripts are not customized per client because the approach of validating for discrete elements is consistent across all Millennium clients. The Data Collection Workbooks and Design Decision Matrix are utilized during unit testing to ensure the appropriate discrete elements are tested.

Design Assessments: System Test scripts must be customized per the departmental workflow for each solution. System Test scripts are located on MethodM > Project Deliverables > Testing – System and can be utilized for a starting point. As the System Testing phase approaches, the Cerner Solution Architects and Delivery Consultants along with client counterparts, must post finalized system test scripts to MethodM > Project Documents site for the Quality Center to utilize for testing.

HP Quality Center: The Quality Center utilizes HP Quality Center tool to track test scripts and record testing outcomes. Test analysts will update test runs with specific details, including Pass/Fail and actual results. The Testing Coordinator will provide testing status updates on weekly basis during validation phases utilizing HP Quality Center reporting capabilities and Quality Center scorecard templates.

Issue Tracking: Quality Center's process for documenting testing defects is to record the failure in HP Quality Center for Cerner internal tracking and sent to the solution teams to address. As issues are resolved, the test analysts will retest and close issues as appropriate.

The MethodM Approach includes access to tools such as MethodM Online. This capability features integrated project management, collaboration and workflow specifically created to help you contain costs by reducing on-going project variance, increasing workflow efficiency, and optimizing human resource utilization. But the utility of MethodM goes far beyond your initial deployment. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership.

MethodM Online includes Enterprise Microsoft Project, which allows multiple users to access the project plans. This is a very powerful aid that gives individuals the ability to track and log their project tasks. MethodM Online also contains data collection tools, including the Design Decision Tool, which tracks critical design decisions and their compliance with known best practices. Other features of MethodM Online include an issues tracking system, a documentation library, a project SharePoint repository, and management reporting.

Our methodology, MethodM, is unique because it delivers predictable results and accelerates the speed at which value can be achieved. MethodM reduces variance thereby ensuring that the implementation design supports strategic goals. It contains a rich on-line project record called MethodM Online. This interactive, sophisticated tool set includes:

1. Access for all sponsors and project team contributors
2. Graphical Management Dashboards
3. Interactive communication
4. "Current Review" and "Future View of Tasks" in context of any critical path
5. "Design Decision Tool" that recommends best practice and documents variation from best practice.
6. Documentation library
7. Project SharePoint
8. Graphical Management Dashboards

Continuous Process Improvement (CPI) Green Belt Program: The Cerner Continuous Process Improvement (Green Belt) Certification is a program that includes workshops and working sessions lead by Black Belts and application of concepts to a project supported by Black Belt and Green Belt mentors.

The program's outcome is intended to certify Consulting Associates with the capability to support or drive Cerner Clients' quality improvement efforts through the use of a variety of continuous improvement tools (e.g., Six Sigma, LEAN, and WorkOut).

After successful completion of the program, presentation of project results, and approval by a certification committee, the associates will be positioned to help show our clients that we are the knowledge and industry experts.

Continuous Process Improvement (CPI) Yellow Belt Program: The Cerner Continuous Process Improvement Yellow Belt Training Plan is a self-study program that includes an online course and an assessment of the associate's knowledge of the material. This online course consists of five modules of study presented by Black/Green Belts. The training plan is to be completed within four months of being assigned. As Black Belts and Green Belts begin Continuous Process Improvement projects, they will need Yellow Belt team members to complete a mature Continuous Process Improvement team.

2.4.9 SYSTEM TESTING

Provide Proposer's proposed system testing methodology, pursuant to Section 1.9 (System Testing) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

We complete Quality Assessments for all projects by performing a combination of functional testing, auditing, and light unit testing. This begins prior to the client's testing and continues throughout the remainder of the project.

There are many phases involved in our system testing methodology. The testing phases include the following:

Functional Testing: Functional testing focuses on the individual functions within the application. It is the first phase of system validation. It establishes usability and validates the process design, the database design, and the application. The objective of this test is to validate the process and database design decisions reflected in the sample data built. It is intended to allow the user to see how the system will functional. The functional test is critical because databases are highly individualized to reflect process requirements. It is important that all functionality be tested against your sample database before proceeding with completion of your database build in order to minimize the risk of redesign and rebuilt of the database later in the project. Another use for the functional test is to ensure that a newly created or recently refreshed domain is operational.

The functional testing is done at the completion of the sample database build. It is recommended that someone other than the database builder is responsible for testing the sample build.

Documentation for the functional test includes a test plan, test script, and test results. Documentation should be retained in accordance with County's interpretations of regulatory guidelines.

Unit Testing: Unit testing focuses on each of the data elements built within the system. During the unit test, County will confirm that each item has been built correctly and is working correctly. The purpose of the unit test is to test that constructed database is fully functional and to test every variable is built.

Unit testing is usually conducted after the database build is complete. However, it is common for a site to complete unit testing as database build is progressing. The database builders and County will participate in unit testing.

Documentation for the unit test includes a test plan, test script, and test results. Documentation should be retained in accordance with County's interpretations of regulatory guidelines.

System Testing: System testing is based on patient scenarios and focuses on the testing of a single department's workflow and system use. The testing scenarios reflect departmental processes, but should also include any cross-departmental processes. In addition to the departmental Cerner applications, foreign system interfaces and medical device interfaces (MDI) may be tested. The process is tested from start to finish.

The purpose of the system test is to:

- Ensure the system, as implemented, meets user requirements for the process flows within the departments.

- Test departmental policies and procedures and how these relate to other hospital departments.

- Ensure that interfaces (foreign and MDI) are functioning properly.

- Test application level security.

System testing is done upon completion of the database build for the department. The department database builders and end users are responsible for this test. Because departmental processes may include personnel for users outside the department, coordination with other database builders/testers may be necessary. Super users and trainers can also assist in this phase of testing.

Documentation for the system test includes a test plan, test script, any system outputs (charts, reports), documented test results, and an issues log. Documentation should be retained in accordance with County's interpretations of regulatory guidelines.

Integration Testing: The purpose of the integration test is to validate the interaction of multiple Cerner solutions and foreign systems in the context of actual patient care situations. A typical integration testing cycle consists of multiple rounds of testing, followed by issues resolution and then retesting. Integration test scripts usually involve multi-day patient scenarios. These multi-disciplinary patient level scripts would run for several hours to several days and reflect common situations for the institution.

The integration test ensures that information is properly shared across Cerner solutions and across systems. It ensures that, based on actual patient scenarios, the system as a whole functions correctly and as designed. Testing of the following components is included in the integration test:

- Foreign system interfaces (FSI)

- Systems operations jobs

- Data security

- Patient and management reports

- Document routing

- Security
- Other peripheral devices
- Cross-departmental policies and procedures
- Typical patient stay scenarios.

The database builders, end users, operators, system manager, representatives from the FSIs, and CernerWorks will be involved in integration testing. Super users and trainers could also participate if they are not engaged in other project activities.

Documentation for the integration tests includes a detailed test plan, test scripts, examples of outputs (charts, reports), issues log, change control documentation, and test results. Also included are any type of validation spreadsheets and checklists. The requirements of government agencies and accreditation organizations vary so documentation requirements will vary. Documentation should be retained in accordance with County's interpretations of regulatory guidelines.

Parallel Testing: The objective of the parallel test is to duplicate functionality and processing on the current system with respect to the new Cerner system. Because the implementation of Cerner solutions is often the impetus for reengineering processes, the ability to conduct a true parallel test is often limited in that the processes and functionality vary enormously between the current system and the new Cerner system.

Parallel testing is done in order to document that the end result is the same from the old system to the new system. Another reason for this test is to validate the process flows and procedures using real data. Parallel testing also allows the end users to practice the new processes and applications, which in turn helps the project team identify training issues and necessary policy and procedure refinements.

Parallel testing is done upon completion of integration testing and after a requisite portion of end users are trained. The end users execute the parallel test; the database builders monitor the process and analyze the results. Ideally, representatives from all shifts participate. A parallel test may take several days to complete because some of the processes to be tested may span multiple days.

The outputs from the old system (charts, billing reports) and the outputs form the new system will be needed. Because it is difficult to duplicate all activity, documentation of what was done with the new process is needed to analyze results. Documentation should be retained in accordance with County's interpretations of regulatory guidelines.

Peripheral Device Testing: Cerner recommends that one of each type of device be setup and tested early in the implementation cycle. In addition, at each phase of testing, it is recommended that the actual type of device (and setup) to be used by end users be utilized in testing.

Customized printed documents, such as face sheets, specimen labels, fill lists, requisitions, are often designed to be printed on a particular printer model. It is important that these documents be tested on the appropriate printer as soon as the site specific code used to format them is delivered. Issues identified in this testing can then be forwarded to the Cerner team responsible for creating the document so that they are resolved well before go live.

In addition to testing the devices themselves, several applications involve routing logic. Adequate devices need to be set up in order to test this routing logic.

When rolling out new devices, it is important to test them to make sure they work correctly with the applications. Another common gotcha encountered during go live is that devices are not setup properly or end users are not trained in the use of devices. Testing each device and providing

adequate training to the end users help eliminate these problems during go live.

Testing is done whenever a new device or a new setup of a device is implemented. testing usually requires both technical and application resources.

As device configurations are finalized, document the details of the device setup, paper stock requirements, printer locations, and printer names. These will enable your technical staff to better support any reported problems or to quickly setup additional devices. It is also important to thoroughly document any printer routing design. This will help in troubleshooting printer routing issues.

Performance Benchmark Testing/Volume Testing: Performance benchmark testing focuses on the system performance of the workstations, networks, servers, and host. Performance benchmark testing is conducted to ensure that acceptable system performance results when system loads are increased beyond peak anticipated levels both for interactive processing and batch functions. This testing is critical as slower than expected performance time is a common gotcha during go live.

Performance benchmark testing is conducted at any time after the database is built and complete. This test should be conducted sufficiently prior to the go live phase to troubleshoot any performance issues. The performance benchmark testing is a combined effort consisting of database builders, the system manager, CernerWorks administrator, network specialists, operations personnel, and interface personnel.

Spreadsheets will be utilized as well as checklists, timers, or other recording devices to document system response time.

Operational Readiness Testing: In an operational readiness test, all system and operations functions and processes are tested including database backup and restore, downtime procedures, parallel server/failover testing, and help desk functions.

Operational readiness is conducted to ensure the system remains operational during any planned or unexpected downtime events and that tools, processes, and personnel supporting the system operation are functioning effectively. This test also validates whether database backup data is accurate.

The operational readiness test may be conducted in conjunction with the integration test. This phase of testing can be conducted any time prior to going live. Operational readiness testing is a combined effort consisting of the system manager, CernerWorks administrator, network specialists, and operations personnel.

Policies and procedures for backups, recovery steps, failover, etc. are some of the documentation required for operational readiness. To assist in preparing for this step, Cerner facilitates a discussion to help your institution begin to develop these strategies.

Post Conversion Production System Validation: Post conversion system validation is really a reality check regarding whether the production use of the system is meeting expectations in key high volume/high risk areas such as billing, requisition, and label printing. Prior to conversion, County will identify the areas to monitor to confirm the system is functioning as required.

it is important to identify these key check points for crisis prevention, allowing for early intervention in problems in key areas. Knowledge of key operational parameters based on data from the old system can assist the users in identifying production problems with new system.

During the first week of conversion and periodically thereafter, check points should be established to confirm that the system is functional. These may include audits, small tests, or reviewing end users.

Department managers, IS staff, and super users may all be involved in these checks.

Regression Testing: Regression testing is a phase of validation that is required when any new variable has been introduced which may invalidate a previous test. It is important to conduct a validation test to confirm the new variable has not adversely affected the expected outcomes. Regression testing may occur at several times, including:

- New code has been implemented.

- Database modifications (major) have been introduced.

- Creation of a new domain.

The regression test is usually based on previous test plans and scripts.

Throughout the project implementation cycle, Cerner and the client share many responsibilities. It is important that the responsibilities for system validation be clearly understood. Responsibility for the validation testing of a Cerner system lies both with Cerner and with County. Internally, our Solution groups test the system using a generic database procedures and test plans. Because of client-defined options and the inherent flexibility of a Cerner system, it is impossible to test each combination of database options. It is necessary for County to test the software to ensure it meets the defined technical specifications and is (using FDA's phrase) 'reasonably free of defects'. Also, most regulatory agencies emphasize the institution is ultimately responsible for the operation and integrity of their system.

Cerner has two primary responsibilities related to system validation:

1. Develop and deliver high quality solutions that meet the technical specifications.

2. Provide direction for County in validating Cerner solutions for use in their organizations.

County's validation protocols should be designed to verify the system does what County expects it to do based on your design and build decisions and when used in conjunction with your database, internal policies and procedures, and your interpretation of local and federal regulations. You are the most knowledgeable about what you expect your Cerner system to do. Therefore, it is important that you design your validation strategy to verify the system does what you are expecting it to do.

County is responsible for the following:

- Creating the system validation strategy

- Creating a test plan for each level of testing

- Performing functional testing

- Validating the database

- Executing the various test cycles, as defined by County

- Coordination of resources and personnel to prepare, conduct the testing, and to participate in issue resolution

- Develop practices for issues management

- Preparing and storing site specific testing documentation

- Completing thorough testing documentation

- Monitoring the system after conversion

- Conducting appropriate validation testing after conversion when changes are introduced

- Ensuring all government regulation requirements are addressed/met.

Cerner will assist in each of these activities, providing guidance and suggestions. Coordination of these events with the entire project team is important to ensure that appropriate Cerner and client resources are available to support the activities.

Cerner primarily uses two solutions to assist with testing Cerner Millennium software: AutoTester, a GUI tool that enables clients to easily build, modify, execute and view workflow-oriented test scripts using underlying Mercury WinRunner technology; and HP Quality Center, a "control panel" approach to the organization and monitoring of complex test cases used for manual and automated testing. Cerner also provides consulting services for these solutions including implementation, training, and project management. These tools are not included in our proposal but we would be happy to quote them upon request.

2.4.10 GO LIVE PREPARATION

Provide Proposer's specific approach and methodology for completing the rollout and post implementation support effort, pursuant to Section 1.10 (Go Live Preparation) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 4 pages.

Our approach to go-live preparation is broken up into four main areas: Project Management, Solution, Learning, and Technical. We have used our vast implementation experience to identify the specific tasks that lead to a successful conversion. Those tasks are identified below.

Project Management:

- Confirming facilities, PCs, network access and sign-ons for conversion staff are ready.
- Finalize conversion staffing needs and cutover plan.
- Finalize conversion issues triage and tracking process.
- Verify Client help desk coverage.
- Finalize conversion change control/PECA process.
- Track show-stopper issues via Go/No Go status report.
- Customize the Solution Turnover documentation and distribute to the project team.
- Coordinate the Diagnostic Center Reviews across the teams.
- Send conversion guide and logistics to the team.
- Ensure ACE support is scheduled.
- Ensure the escalation process is understood across the team.
- Client training on logging and tracking service records has been completed and communicated.
- Ensure the client HIM, client contact, and client contract information is complete and accessible in applicable tools.
- Ensure any entitlements are added to client information. Client has a defined and documented change management strategy and process in place.
- Verify all operations cycles and chart runs have run successfully.

• Validate that client's service and maintenance contracts are complete.

• Validate that Cerner application license fees for all solutions being turned over for support have been activated.

• Ensure all backup procedures are defined, documented, and tested.

• Document any custom code in the client's environment and set expectations regarding Cerner support.

• Schedule Architecture, Troubleshooting and Issue Management course.

• Provide Operation Stage guide to client.

• Direct the client to complete the client care survey on Cerner.com.

• Customize the Turnover Presentation and Agenda to be presented on the Turnover call.

• Schedule Support Turnover call.

• Review the CernerWorks contract, and optional AMS contract if applicable, and discuss ongoing level of support.

• Attach project plan to Turnover Activity Plan in Navigator.

• Compile documentation and/or audit of MethodM tasks for Turnover to review on Turnover call.

• Send call agenda to Turnover call participants.

• Complete Turnover activity in Navigator on completion of MethodM activities.

Solution:

• Review the Conversion Readiness Assessment for each solution.

• Review and update the Conversion Cutover Plan for each solution.

• Complete the Turnover Process documentation for each solution.

Learning:

• Ensure super users are trained to deliver end-user training.

• Review Learning Conversion Readiness Assessment and update in the project plan.

• Review

Technical

• Begin history uploads.

• Review the Technical Conversion Readiness Assessment.

• Complete the volume test with end-users to simulate the production load.

• Complete the high availability test with the client.

• Freeze code and database.

• Activity data delete and system reboot.

We work very closely with County to ensure every aspect of the project is ready for conversion. The

County staff that will be directly involved in the go-live preparation tasks are identified in the tasks listed above. The staff includes Project Team Staff, End-users, Super Users, Trainers, Clinical Staff, and IT/Help Desk staff. Their levels of participation vary based on each task.

In addition to the tasks listed above, County will participate in a Trainer and Conversion Preparation Session that takes place in the middle to end of the project. The Trainer and Conversion Preparation event is the portal for transitioning project ownership from Cerner to County. Solution and Project Management sessions during this week focus on assessing the County's knowledge of the system as well as preparing the County for training events and conversion.

The majority of the information supplied by the County should be built by this time with a few outliers. Unit Testing should be near completion and System Testing should be in progress. The rest of the Cerner project team participates via conference call.

Solution-Specific Activities and Objectives

- Demonstrate a clear understanding of system and departmental processes using the TCP Client Demo Script.
- Begin preparation for conversion.
- Understand existing open issues in eService and escalate as appropriate.
- Develop the Solution Education Strategy document using the Client Leading Strategic Change Workshop and Sample Training Materials document.

Project Management Activities and Objectives

- Initiate process of Ownership Transition.
- Confirm unit and system testing is in process, on track, and scheduled for completion before Integration Testing.
- Review and Validate Integration Test Scripts.
- Identify any and all outstanding items required for Integration Testing and create action plan.
- Confirm facilities and hardware are in place to support integration testing.
- Confirm adequate number of users will be trained and available for integration testing.
- Initiate development of Action Plan for Deployment.
- Finalize Integration Test Plan.
- Initiate Conversion Plan.

Location: Client Site

Duration: Four to five days (dependent on the number of solutions being implemented)

Solution-Specific Activities Conducted by: Cerner Solution Delivery Consultant, Project Management

Project Management Activities Conducted by: Cerner Engagement Leader, Cerner Technical Engagement Leader, and Cerner Integration Architect

County Participants: County Analysts, County Project Manager, County Process Architect, County Testing Coordinator, County Education Coordinator, County Peripherals Coordinator, County System Engineer, County Clinical Managers, County Transformation Coordinator, County Technical Engagement Leader

County Responsibilities:

- Demonstrate understanding of system and departmental processes by leading a demonstration(s) of the applications
- Finalize Training Strategy
- Finalize Integration Test Scripts and Integration Test Plan
- Develop and own the conversion plan
- Provide adequate training facilities (one PC per person) for the end users
- Schedule training
- Schedule and perform end-user training
- Confirm adequate number of user will be trained and available for Integration Testing
- Sign off Event Summary

Cerner Participants: Cerner Solution Delivery Consultants, Cerner Solution Architects, Cerner Engagement Leader, Cerner Integration Architect, Cerner Technical Engagement Leader, Cerner System Engineer

Cerner Responsibilities:

- Provide demo scripts
- Validate County has thorough understanding of applications and system workflow
- Document and review Solution and Project Management Conversion Readiness Assessments with County
- Assist County in finalizing their Training Strategy by reviewing the Leading Strategic Change Workshop Summary and Trainer Handbook
- Provide sample integration test script and assist with integration test planning
- Provide sample conversion cutover plan and assist with conversion planning
- Review technical readiness assessment

2.4.11 PRODUCT SUPPORT AND TRANSITION

Provide Proposer's proposed production support and transition approach for the EHR project, pursuant to Section 1.11 (Product Support and Transition) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 2 pages.

After conversion to production, your Cerner project team will continue to provide support for non-critical patient care issues until your site has been transitioned to SolutionWorks. For critical patient care issues, the Immediate Response Center (IRC) is available. Your Cerner Engagement Management team will work with your Project Management team to coordinate the transition process.

To get your organization prepared for ongoing maintenance and support, we have incorporated the Maintenance Training Session into our implementation methodology. During the Maintenance Training Session, your organization learns how to maintain the system using database build and maintenance tools. the session encompasses common maintenance activities. The objectives of the

session include:

- Equip the client representatives to make common database updates.

- Locate supporting documentation and educate the client on the tools used to troubleshoot the system and database build issues.

- Identify the process for maintaining and modifying the database.

In addition to the database maintenance tools, your organization will have access to cerner.com. Cerner.com offers clients the freedom and flexibility to access valuable information about their business relationship with Cerner, complete business transactions, research solution issues, track ongoing service records, and connect with other clients and Cerner associates through uCern.

Cerner's Application Management Services (AMS) is an optional offering that provides direct and continuous support for the day-to-day operational management of Cerner solutions. AMS works closely with Client Staff, CernerWorks, the Immediate Response Center, and SolutionWorks.

Service Options include Level 2 Application Management and Application Monitoring as described below.

Level 2 Application Management:

- Issue Management - Service which focuses to address reporting failures of previously working functionality within Cerner Applications. Service ensures applications are working effectively, efficiently, and as designed by bridging the gap between the client's Help Desk and SolutionWorks (leve-3 support).

- Application Maintenance - Service which maintains client applications by designing, building, and testing requested changes to existing implemented Millennium functionality.

- Content Management - AMS performance content uploads, occurring on a scheduled basis (x times per month, per quarter, per year).

- Change Management - This process ensures that changes occur in a controlled environment so that all parties understand the potential impact of an impending change and identifies potentially affected systems and processes prior to implementation of the change(s).

Application Monitoring:

Service which monitors client's Cerner applications to find and correct issues before the end user is impacted. AMS monitors and maintains chart requests, print queues, faxes, interface transaction queues, operations jobs, and other application-related items.

The duration of services is flexible based upon client needs and is established as a part of the scoping process.

2.4.12 ANTICIPATED RISKS/ASSUMPTIONS

Provide areas of the EHR System implementation, including Services, which constitute the highest risks and discuss Proposer's approach to management and mitigation of those risks.

Identify assumptions and dependencies on which proposer has based its proposal, pursuant to Section 1.12 (Anticipated Risks/Assumptions) of Appendix J (Implementation Requirements). Proposer's response for this Section is limited to 1 page.

The following risk factors should be discussed and evaluated with the client at every project as early as possible. Developing a plan to mitigate issues and project risk is fundamental. Each of the risks identified below may result in extended project duration, additional professional services fees and/or low adoption rates.

The schedule for project events is set far in advance of the actual event taking place. Missing a deadline may result in an event needing to be delayed. Delayed events are rescheduled for the next available time slot, which could be several weeks out. A delay of any event may result in a deferred conversion and/or additional professional services fees.

The County has to ensure that the staffing that Cerner recommends for this project is available and that clinicians that are needed for the project have their positions back filled so they have time to participate. Contingency plans to cover project team departmental responsibilities are recommended. Not having appropriate staff available for required events may results in a deferred conversion and/or additional professional services.

Per Gartner, lack of end-user participation is the single reason that IT projects fail. Cerner recommends that the client assign an Education Coordinator to plan and manage the organization's end-user education and training. Lack of end-user participation in education and training may result in low adoption levels of the new system and require additional training, thereby increasing the professional services for the system if Cerner is selected to do the additional training.

Blood Bank Transfusion (BBT) Validation is a 12-week exercise that occurs only after BBT build is complete. This requires dedicated staffing by the BBT department or third party involvement at additional expense. Plans for this process must begin early in the project.

By their nature and dependencies, foreign system interfaces and history uploads are critical to the project from the point of kickoff. Connectivity to all systems must be established early. Usually, this requires coordination with other vendors. Furthermore, FSI should be included in every test plan according to the organization testing strategy. Access to resources from vendors must be provided in a timely manner to avoid delays with interfaces, which could result in delays in the timeline.

Cerner recommends that at least one person per solution be assigned to the project for the success of resource allocation. Failure to staff the project with the right numbers or skill set results in missed dates and frustrated team members. Solution specific resource requirements are identified later in this guide.

Making sure label and report printers, label stock, desktops, bar code readers and wands are appropriately selected, properly placed, correctly configured, installed on time, and testing is one key to a successful implementation. Not having these items in place and tested on time may result in a delay in the timeline and additional professional services. Cerner recommends that the client assign a Peripherals Coordinator to plan and manage this important area of the implementation strategy.

Large organizations with multiple facilities have to agree on the overall EHR design and workflow. There must be executive leadership involvement in the project for any key decisions that result from differing opinions among representatives from different facilities.

There must be very good communication, and strong team cohesion around the vision and the

mission.

If any metrics provided for the number of facilities or scope of the project are incorrect, the duration may extend or additional professional services may be required.

Project Gateways serve as means to evaluate a project's progress against key deliverables. The intent is to manage project risk and ensure quality implementations. The framework of Project Gateways is to evaluate a project at five points within a project lifecycle to ensure key deliverable completion. It also offers a mechanism and process to track risk response plans for deliverables that are incomplete by the prescribed due date. Projects not meeting minimum Gateway criteria will have risk response plans and timelines documented. Projects not making sufficient progress on keys deliverables outlined in the Project Gateways may have the potential to not pass on to the next "phase" of work until deliverables are complete and/or the subsequent risks have been mitigated. Delays to the timeline could require additional professional services.

2.5 APPENDIX K (ADMINISTRATIVE REQUIREMENTS)

2.5.1 GENERAL QUALIFICATIONS

(i) Experience and Background

Provide Proposer's response regarding experience and background pursuant to Section 1.1.1 (Experience and Background) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 4 pages.

Since 1979, Cerner has focused exclusively on designing and deploying healthcare IT solutions that improve efficiency and quality of care. Cerner is the leading U.S. supplier of healthcare information technology solutions that optimize clinical and financial outcomes. Around the world with more than 9,300 facilities in 23 countries, health organizations ranging from single-doctor practices to entire countries turn to Cerner for our powerful yet intuitive solutions. Cerner offers clients a dedicated focus on healthcare, an end-to-end solution and service portfolio, and proven market leadership.

Barb Brown brings 25 years of Healthcare IT consulting experience; progressive responsibility in account management and system implementation. She has 17 years of Cerner experience and is PMP certified. Barb has expertise in managing system implementation from initiation through productive use following structured methodology. Proven experience with a broad spectrum of Cerner Solutions such as: CPOE, Clinical Documentation, Ancillary Systems and Technology solutions. Barb also has Knowledge of and experience with LA County Hospital policies, processes and systems.

Cerner participates in a variety of certification programs with the Certification Commission for Health Information Technology (CCHIT) for both ambulatory and hospital certification. CCHIT is a recognized certifying body for Meaningful Use with the Office of the National Coordinator (ONC) of the U.S. Department of Health and Human Services, and is an ONC Accredited Temporary Certifying Body (ONC-ATCB) for the ONC-ATCB 2011/2012 certification program. CCHIT continues to administer its traditional version, which was rebranded as a comprehensive "good housekeeping seal" for certification of inpatient, ED and ambulatory EHRs. This certification is no longer considered a necessary certification, as the ONC-ATCB 2011/2012 program is the only certification recognized by ONC as the accredited program for federal HIT programs including meaningful use and the Stark/Anti-Kickback Law HIT safe harbors.

Cerner's certifications with CCHIT under the traditional comprehensive program are:

CCHIT Certified 08 – Emergency Department EHR – 4/22/09

CCHIT Certified 08 Ambulatory EHR – Cerner Millennium PowerChart/PowerWorks EMR 2007.19 – 4/22/09

In 2001, Cerner elected to have all operational organizations included under Cerner's ISO certifications. Most Cerner locations are certified. These are listed below and on the certificates.

For Cerner's Complete EHR certification and modular EHR certified solutions for both Eligible Provider and Hospital for Meaningful Use – see http://www.cchit.org/products/onc-atcb or http://onc-chpl.force.com/ehrcert for full listings across 2007.19.12, 2010.01.07 and 2010.02.01.

Cerner takes its obligations to the public's health very seriously. We believe adherence to the FDA's Quality System Regulation (QSR) is a minimum requirement for any activity in the medical device software industry. To go beyond QSR and broaden our commitment to quality, safety, and effectiveness for our clients and their patients, we have created and distributed the Cerner Quality Statement, established and implemented a quality system with associated performance objectives and metrics, and promote continuous improvement. Cerner has achieved ISO 9001:2000 and ISO 13485:2003 quality system certifications for specific locations.

At every stage in Cerner's 33-year history, the view from the competitive field has appeared to be roughly the same for us. There has always been one strong competitor showing up consistently in the face-off situations, and our current state is no exception. When we back away and look at the same race over three decades, however, the view looks very different. A new truth emerges. It hasn't been the same competitor. In each era, it has been a different company. Not only have most of our one-time rivals fallen behind, many don't even exist as companies today. The outcome is never certain, but we believe the road ahead, ultimately, has some sharp bends; if you miss just one, you are history. The key to staying in the race is having a vision for the future … even while you're competing in the present. Our vision for the future has always remained a key Cerner differentiator. Cerner has and continues to execute its vision to make health care safer and more efficient.

Cerner believes that the clinical benefits and operational efficiencies that health care information technology facilitates should be available to all patients and providers, large and small. Therefore, Cerner has focused its line of solutions to scale from critical access hospitals to community hospitals, academic medical centers, large IDNs and entire countries. Other vendors in the industry, because of business decisions or functional limitation, focus on individual market segments.

Black Book, Gartner, analyst reports all agrees; we lead the pack. Cerner's breadth and depth of solutions is best positioned to get our clients to Stage 2 meaningful use. In fact, today we are leading in the number of hospital attestations. Other companies are focused on 'automating the paper chart' while Cerner is focused on delivering value to our clients by helping them improve efficiencies and outcomes, helping to control costs and helping them manage their population health.

108 clients have completed EHR System software implementations from the past three (3) years. The number of those clients with 600+ beds or 1000 physicians is not tracked.

Cerner does not break down status to the module. We currently have 1,888 associates assigned to development , 3,679 associates in the Consulting role, and 963 associates in Support.

There are 25 Public Health clients at 35 sites that have purchased Cerner Millennium.

Please find detailed profiles for the following clients: Cook County, IU Health, Truman & Banner Health. Additional information requested above is not kept on our clients, and could not be released

without their consent. These clients are available to host a call or visit from you to discuss these specific questions.

Predictable/Structured Methodology/Fixed Fee-Cerner's professional services methodology, MethodM, bolstered by 30-plus years of implementation experience, offers a fixed-fee pricing model- one that provides our clients with predictable cost of ownership. Cerner's methodology was established to support the execution of a standardized, event-based implementation approach to deliver predictable results and to accelerate the speed at which value can be achieved from Cerner solutions.

Lower Total Cost-The MethodM Approach includes access to tools such as MethodM Online. This capability features integrated project management, collaboration and workflow specifically created to help you contain costs by reducing on-going project variance, increasing workflow efficiency, and optimizing human resource utilization. But the utility of MethodM goes far beyond your initial deployment. As you maintain, upgrade, and enhance Cerner Millennium, MethodM will continue to improve the quality of outcomes and lower your total cost of ownership. The top 5 differentiators in Cerner's project approach are:

Integrated Platform-Cerner MethodM is an integrated platform, providing these important features:

Outcomes-based approach - Aligning with your organizational imperatives

Disciplined and predictable processes - Providing the right resource at the right time

Leveraged client interaction and experience - Proven to reduce risk and variability

A logical continuum - From procurement to clinical transformation

Online Toolset-MethodM is more than just an approach, it is a rich online toolset that project teams use to design, build, and manage implementation projects. MethodM Online includes Enterprise Microsoft Project, which allows multiple users to access the project plans. This is a very powerful aid that gives individuals the ability to track and log their project tasks. MethodM Online also contains data collection tools, including the Design Decision Tool, which tracks critical design decisions and their compliance with known best practices. Other features of MethodM Online include issues tracking system, a documentation library, a project SharePoint repository, and management reporting.

Automated Implementation Tools-Finally-we provide an automated toolkit –Bedrock--that eliminates much of the variance and error in building and maintenance tasks. Bedrock uses tools, known as "wizards," to configure the system based on survey questions, forms, work charts, legacy data and graphical displays. The tool, through the use of a natural language approach, reduces learning curves and time required to master implementation build tools. Embedded in the tool are common medical terminologies that leverage Cerner's executable knowledge content and capabilities. It also is designed to understand the dependencies among build tasks, resulting in cleaner implementations with less variance.

a 100% b.We don't have an outside certification. c.Cerner has received Training Magazine's Top 125 recognition for 13 consecutive years.

This award recognizes organizations around the world for their outstanding efforts in human capital development, as determined by Training Magazine, a publication focused on training best practices, benchmarking, and standards for a global audience.

The data provided in the Top 125 applications is scored and evaluated quantitatively and qualitatively by Training. Each organization's ranking is based on many factors, including financial

commitment, new training initiatives and best practices, evaluation and measurement, and a wide variety of statistics such as turnover/retention and number of training hours per employee.

We require all new associates to complete training.

Cerner's Solutions Center partners with health care organizations to envision, design, build and deploy Cerner solutions. These deployments occur within a defined scope. They include highly skilled consultants and project management tools created specifically for each type of project.

Whether implementing Cerner solutions for the first time or subsequent phases, our Solutions Center will help you streamline your implementations, reduce costs and optimize resources for greater discipline, predictability and quality.

The Solutions Center offers expert solution consultants, repeatability, efficiency and speed to value. Its approach to deployment—aligning the right people, processes, solutions, methods and technology—ensures your implementation projects are completed on-time and within budget. Through the Solutions Center, proven processes scale across many health care venues, including:

•Integrated delivery networks (IDN)

• Pediatric

• Academic

• Regional hospitals

• Specialty hospitals

• Community health care

• Correctional

The Solutions Center helps organizations speed implementations and enhance safety. We organize design sessions that bring together the right roles to make workflow and system decisions.

Solutions Center services include embedded adoption activities, such as governance structure, communication strategy and resource planning. Our projects can be either remote- or client-hosted.

The Solutions Center uses Cerner's implementation approach, MethodM®, which is the culmination of experiences and best practices gained from hundreds of Solutions Center projects.

MethodM gives you access to the valuable lessons learned by your peers, who have had successful implementations. MethodM seamlessly integrates communications to alleviate many of the challenges project teams face to guarantee the right resources are doing the right work at the right time.

For example, MethodM includes an online design decision management system, which automatically alerts your leadership if a decision deviates from the recommended system design.

In addition, we manage project deliverables and documents centrally in a project-focused site and make them available to the entire project team.

Since its inception, the Solutions Center has experienced rapid growth, implementing approximately 3,535 solutions across more than 415 projects.

Cerner continuously improves processes based on client feedback, incorporating lessons learned. Based on these responses, we now provide expanded offerings with a well-defined scope and starter test scripts.

Also, we have more clinical resources with greater levels of experience.

You can rely on our team for successful project management and improved resource continuity. The

Solutions Center approach provides a structured implementation experience, reducing variance and lowering your total cost of ownership. We deliver predictable Cerner Millennium® engagements with accountability and reduced complexity, allowing you to realize the full value of your Cerner solutions over time.

For more than 30 years, Cerner has transformed health care by eliminating error, variance and waste for providers and consumers around the world. As we enter our fourth decade, we remain focused on developing innovations that will improve our entire system.

Health care is too important to stay the same, so we're changing the way people:

-Use and share information

-Pay for health and care

-Think about health

(ii) Performance History

Provide Proposer's response regarding performance history pursuant to Section 1.1.2 (Performance History) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 3 pages.

1.a.b.c.d.:Please refer to in Appendix O (County Required Forms), Exhibit O 2 (Prospective Contractor References).

Please refer to in Appendix O (County Required Forms), Exhibit O 3 (Prospective Contractor References).

Please refer to in Appendix O (County Required Forms), Exhibit O 4 (Prospective Contractor List of Terminated Contracts for Non-Performance).

Cerner has not been excluded in participating in a government payor program such as Medicare. Cerner is not aware, to the best of its knowledge as of the date of this RFP response, that any of Cerner's officers or directors has been excluded from participating in a government payor program such as Medicare.

No. Cerner has never been suspended from participation in bidding on any public (e.g., federal, State, County, city) contracts.

Cerner is not aware of any current investigations of Cerner by any such government agencies; however, we have been subject to routine investigations over the years by governmental entities such as the FDA. Cerner does not actively monitor its clients to determine whether they are subject to investigation by such governmental enforcement agencies.

As of the date of this response, there is no existing litigation pending against Cerner that would have a material adverse effect upon our ability to provide the solutions and services quoted in this response.

There is no third party software and hardware (including the owner, licensor, and/or seller thereof) that is bundled into or is a component of the proposed EHR System and Services.

There are no failures or refusals to complete a contract.

(iii) Financial Strength

Provide Proposer's response regarding financial strength, pursuant to Section 1.1.3 (Financial Strength) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 2 3/4 page.

Please refer to the following documents: Attachment K.A. Cerner Annual Report 2010, Attachment K.B. Cerner Annual Report 2009, and Attachment K.C. Cerner Annual Report 2008.

As of the date of this response, there are no potential commitment that would impact assets, lines of credit, guarantor letters, etc. that may affect the Cerner's ability to perform the Agreement.

Cerner banks with US Bank Corp. US bank Corp is located 9900 West 87th in Overland Park, Kansas 66213.

This is not applicable to Cerner.

Cerner's Dun & Bradstreet number is 04-241-0688. With this number you can request a D&B report. Our credit rating is 5A1.

Cerner's mission and focus is to transform healthcare by delivering solutions and services to our clients that increase the quality of care, enable greater efficiencies, and improve patient safety. In considering an acquisition, we assess only deals that would complement Cerner's core clinical, management and financial suite of integrated solutions and leverage our investments to new market segments.

Cerner understands that the "Best of Breed" approach has evolved with the increasing capabilities of technology and the need for sharing data in a timely, meaningful and appropriate way. In some cases, there are niche companies that could not survive in the marketplace on their own but had missions that aligned with Cerner's quest to transform healthcare through technology. By joining forces with Cerner, these companies provide our clients with access to world-class, integrated systems and service. These acquisitions allow us to better serve the consistently changing needs of current and future clients by enhancing our core Cerner Millennium solutions with very specific functionality, integrating content as executable knowledge, and increasing our market share within a given segment.

IMC Health Care, Inc. January 4, 2010 Cerner Health Connections, Inc. Provider of employer sponsored on-site health centers to expand Cerner's employer health initiatives, such as on-site employer health centers, pharmacies and wellness programs-Merger

Triplett & Adams Enterprises, Inc., d/b/a Resource Systems.May 23, 2011.Merged into Cerner Corporation Solutions for the long term care market, including skilled nursing facilities, nursing homes, hospice, home health, developmentally disabled, continuing care communities, retirement communities and personal care/rest homes. CareTracker® and MDS Director™-Merger

Clairvia, Incorporated October 17, 2011.Merged into Cerner Corporation.Health care workforce management solutions for patient and staff management, including Care Value Management™ and Physician Scheduler™-Merger

Cerner will agree that neither party may assign the contract or the licenses and privileges granted under it. Cerner may, however, assign and delegate in conjunction with a reorganization or merger, or in conjunction with the sale of substantially all of its assets to which the Agreement pertains, or in conjunction with any other assignment or transfer to which Client consents in writing.

To better serve you, Cerner establishes alliances with the "best in the business" - companies like Cerner with the proven vision to help transform your organization through healthcare IT solutions. As leaders in their respective industries, Cerner's partners bring an established track record of

innovation and results that will make your Cerner solutions even more effective.

Some partners include: Dell,IBM,HP,Oracle,BMC,Sprint.

We commit significant resources to developing new health information system solutions. As of the end of 2010, approximately 2,400 associates were engaged in research and development activities. Total expenditures for the development and enhancement of our software solutions were approximately $284.8 million, $285.2 million and $291.4 million during the 2010, 2009 and 2008 fiscal years, respectively. These figures include both capitalized and non-capitalized portions and exclude amounts amortized for financial reporting purposes.

(iv) Internal Controls, Audit Coverage, and Insurance Requirements

Provide Proposer's response regarding internal controls, audit coverage, and insurance requirements, pursuant to Section 1.1.4 (Internal Controls, Audit Coverage, and Insurance Requirements). Proposer's response to this Section is limited to 1 page.

Cerner conducts the SSAE. The SSAE-16 supersedes the familiar SAS 70 report beginning with reporting periods ending on or after June 15, 2011. SSAE-16 continues the focus on reporting on controls at service organizations when those controls are likely to be relevant to their user entities' internal control over financial reporting. However, we do not release this report without an NDA signed.Cerner is willing to work with County to provide additional information if necessary.

(v) Willingness to Provide Other Information

Provide Proposer's statement regarding its willingness to provide County with any other information County determines is necessary for an accurate determination of the prospective Proposer's qualifications to provide the EHR System and Services, pursuant to Section 1.1.4 (Internal Controls, Audit Coverage, and Insurance Requirements) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 1/4 page.

Cerner is willing to work with County to provide additional information if necessary.

2.5.2 PROPOSER USE OF SUBCONTRACTORS

Provide information regarding Proposer's use of subcontractors, pursuant to Section 1.2 (Proposer Use of Subcontractors) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 1 page.

We are not using subcontractors.

2.5.3 PERFORMANCE OF SERVICES OUTSIDE THE UNITED STATES

If Proposer intends to use resources outside the United States, including Proposer affiliates and subcontractors, provide required information, pursuant to Section 1.3 (Performance of Services Outside the United States) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 1 page.

We do not use first line services provided outside the United States.

2.5.4 PROPOSER OUTSIDE THE UNITED STATES AND OFF-SITE SECURITY PRACTICES AND RECOMMENDATIONS

As to any Service provided outside the United States or off-site, provide Proposer's responses to each of the security questions in Section 1.4 (Proposer Outside the United States and Off-Site Security Practices and Recommendations) of Appendix K (Administrative Requirements). Proposer's response to this Section is limited to 1 page.

Please see above. Not applicable.

The undersigned below represents and warrants that he/she is authorized to make representations for Proposer, that the representations are true and correct, and that he/she is authorized to sign for and on behalf of Proposer. Proposals signed by other than the owner of a sole proprietorship, an authorized officer of a corporation, an authorized general partner of a general or limited partnership, or a manager or managing member of a limited liability company must include a power of attorney authorizing the signature.

Proposer's Company Name: Cerner
Signed by: Marc G Naughton
Print Name: Marc Naughton
Title:
Date: 03/01/2012
Address: 2800 Rockcreek Parkway
North Kansas City, MO 64117

E-mail: mnaughton@cerner.com
Telephone: 816-201-1989
Fax: 816-571-1989

Exhibit W.3 (Organization Documents)

to the

Electronic Health Records System and Services Agreement

Attachment 6.3 (Organization Documents)

Enclosed are the requested “Certificate of Good Standing” and a conformed copy of the most recent “Statement of Information” as filed with the California Secretary of State.

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Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "CERNER CORPORATION" IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-FIFTH DAY OF OCTOBER, A.D. 2012.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.

Jeffrey W. Bullock, Secretary of State

2103665 8300

AUTHENTICATION: 9943036

121165074

DATE: 10-25-12

You may verify this certificate online
at corp.delaware.gov/authver.shtml

State of California
Secretary of State

CERTIFICATE OF STATUS

ENTITY NAME:

CERNER CORPORATION

FILE NUMBER:	C1696336
REGISTRATION DATE:	08/15/1991
TYPE:	FOREIGN CORPORATION
JURISDICTION:	DELAWARE
STATUS:	ACTIVE (GOOD STANDING)

I, DEBRA BOWEN, Secretary of State of the State of California, hereby certify:

The records of this office indicate the entity is qualified to transact intrastate business in the State of California.

No information is available from this office regarding the financial condition, business activities or practices of the entity.

IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this day of October 25, 2012.

Debra Bowen

DEBRA BOWEN
Secretary of State

JNG

State of California

Secretary of State

STATEMENT OF INFORMATION

(Foreign Corporation)

Fees $25.00.

IMPORTANT - Read instructions before completing this SI-350 form.

Copies of e-filed statements are not provided at the time of filing. Therefore, you may wish to print the completed pages for your records prior to submission. Copies of filed documents may be requested using our Business Entities Records Order form.

1. CORPORATION NUMBER, NAME AND ADDRESS OF RECORD

C1696336
CERNER CORPORATION
2800 ROCKCREEK PARKWAY
KANSAS CITY , MO 64117

2. ☐ If there has been no change in any of the information contained in the last Statement of Information filed with the California Secretary of State, check the box and **proceed to Item 12**.

If there have been any changes to the information, or no Statement of Information has been previously filed, the form must be completed in its entirety.

3. STREET ADDRESS OF PRINCIPAL EXECUTIVE OFFICE (DO NOT USE PO BOX)

ADDRESS			
2800 Rockcreek Parkway			
CITY	STATE	ZIP CODE	COUNTRY
North Kansas City	MO	64117	UNITED STATES

4. STREET ADDRESS OF PRINCIPAL BUSINESS OFFICE IN CALIFORNIA, IF ANY (DO NOT USE PO BOX)

ADDRESS		
818 West 7th Street		
CITY	STATE	ZIP CODE
Los Angeles	CA	90017

5. MAILING ADDRESS OF THE CORPORATION, IF DIFFERENT THAN ITEM 3

IN CARE OF/ATTENTION			
ADDRESS			
CITY	STATE	ZIP CODE	COUNTRY
			UNITED STATES

LIST THE NAMES AND COMPLETE ADDRESSES OF THE OFFICERS (The corporation must list these three

officers.)

6. CHIEF EXECUTIVE OFFICER

FIRST	MIDDLE	LAST
Neal	L	Patterson

ADDRESS
2800 Rockcreek Parkway

CITY	STATE	ZIP CODE	COUNTRY
North Kansas City	MO	64117	UNITED STATES

7. SECRETARY

FIRST	MIDDLE	LAST
Randy	D	Sims

ADDRESS
2800 Rockcreek Parkway

CITY	STATE	ZIP CODE	COUNTRY
North Kansas City	MO	64117	UNITED STATES

8. CHIEF FINANCIAL OFFICER

FIRST	MIDDLE	LAST
Marc	G	Naughton

ADDRESS
2800 Rockcreek Parkway

CITY	STATE	ZIP CODE	COUNTRY
North Kansas City	MO	64117	UNITED STATES

9. CHECK THE APPROPRIATE PROVISION BELOW AND NAME THE AGENT FOR SERVICE OF PROCESS

☐	AN INDIVIDUAL RESIDING IN CALIFORNIA AGENT'S FIRST MIDDLE LAST
☑	A CORPORATION WHICH HAS FILED A CERTIFICATE PURSUANT TO CALIFORNIA CORPORATIONS CODE SECTION 1505. NAME OF CORPORATE AGENT View List CT Corporation System

10. STREET ADDRESS OF AGENT FOR SERVICE OF PROCESS IN CALIFORNIA, IF AN INDIVIDUAL

ADDRESS

CITY	STATE	ZIP CODE
	CA	

11. DESCRIBE THE TYPE OF BUSINESS OF THE CORPORATION

Sale of computer services

12. THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT. ENTER THE NAME AND TITLE OF THE PERSON COMPLETING THIS STATEMENT.

DATE	TITLE	FIRST	MIDDLE	LAST

8/27/2012	CFO	Marc	G	Naughton

Continue Filing | Cancel SI/New Search

State of California

Secretary of State

Confirmation of Receipt of Document/ Receipt for Payment

IMPORTANT: Do not use the Back button on your browser. Using the Back button will result in duplicate charges being applied to your credit card.

Return to Main Page

Transaction ID:	AA4A39-156F56B7-5A38-16C8-6F7F-603DBAB4C81E
Confirmation #:	015967
Charge Description	E-file Statement of Information for C1696336
Name:	Cerner CorporationKarolina Fannin
Address:	2800 Rockcreek Parkway
Address Line 2	
City/State/Zip:	North Kansas City , MO 64117
Phone:	(816) 221-1024
Email:	
Amount:	25.00
E-File Session:	3408956
AVS Response:	Y
Date/Time:	8/27/2012 11:17:04 AM

Note: Confirmation of receipt does not constitute an approved/accepted filing. We recommend that you print or save this screen as a record of your E-file transaction and credit card payment.

Copies of filings after submission may be requested using our Business Entities Records Order Form.

If you are representing a business, we want you to be aware of a deceptive solicitation sent to many companies implying they have to go through a private, third party vendor – and pay an exorbitant fee – in order to file official documents with our office.

These solicitations are asking for fees of up to $495 to file various documents with our office – documents that, in most cases, have a filing fee of $25 for Statements of Information at most and $0 for termination documents.

A Customer Alert on our website at www.sos.ca.gov/business/be/alert-misleading-solicitations.htm has more details about these deceptive ploys, as well as information on how you can file documents

Exhibit W.4 (Third-Party Certifications)

to the

Electronic Health Records System and Services Agreement

Proprietary and Confidential

Proprietary and Confidential

Exhibit W.5 (Minimum Mandatory Requirements Proposal)

to the

Electronic Health Records System and Services Agreement

ELECTRONIC HEALTH RECORDS SYSTEM (EHR SYSTEM)

REQUEST FOR PROPOSALS

APPENDIX T

(MINIMUM MANDATORY REQUIREMENTS PROPOSAL)

November 15, 2011

1. REQUISITE EXPERIENCE

In order for a Proposal to pass Evaluation Phase 1 (Evaluation of Minimum Mandatory Requirements Proposals) and be considered for the remaining phases of the evaluation process, Proposers shall submit a completed, signed version of this Appendix T (Minimum Mandatory Requirements) ("Minimum Mandatory Requirements") as their Minimum Mandatory Requirements Proposal and submit pertinent documentation and/or written responses as part of their Minimum Mandatory Requirements Proposal in support of the such Minimum Mandatory Requirements, as requested. Therefore, Proposer's Minimum Mandatory Requirements Proposal will consist entirely and solely of its completed, signed version of this Appendix T, all applicable documentation and/or written responses in support of the Minimum Mandatory Requirements, as requested, and its completed, signed version of Appendix T-1 (Minimum Mandatory Requirements Proposal Checklist). Failure to meet any of the Minimum Mandatory Requirements shall result in a rejection of a Proposal.

Please submit the pertinent documentation and/or written responses in support of each applicable Minimum Mandatory Requirement as separate Attachments to this Appendix T with a specific reference to the Minimum Mandatory Requirement section number pursuant to which such documentation and/or written response is provided.

Proposer must submit one (1) original Minimum Mandatory Requirements Proposal, three (3) hard copies, and two (2) electronic copy in the format specified in Section 4.5.3 (Formatting) of the RFP on Universal Serial Bus (USB) memory drive, in a separately sealed envelope or box, plainly marked in the upper left-hand corner with the name and address of Proposer and bearing the words "Minimum Mandatory Requirements Proposal, Request for Proposal for Electronic Health Records (EHR) RFP # KL2011, Proposal due by December 9, 2011, 12:00 p.m. Pacific Time," as provided in Section 1.3 (Schedule of Events) of the RFP.

2. PROPOSER QUALIFICATIONS

The Minimum Mandatory Requirements, as detailed in this Section 2 (Proposer Qualifications), are:

- ONC-ATCB Certified
- Comprehensive
- Integrated
- Implemented in customers with similar scope and scale to LA DHS
- Ongoing support to customers with similar scope and scale to LA DHS
- Market Penetration

2.1 ONC-ATCB CERTIFIED

The Secretary of the Department of Health and Human Services (HHS) has determined that certification by an ONC-Authorized Testing and Certification Body (ONC-ATCB) will signify to eligible professionals, hospitals, and critical access hospitals that an EHR technology has the capabilities necessary to support their efforts to meet the goals and

objectives of meaningful use. The ONC-ATCBs are required to test and certify EHRs to the applicable certification criteria adopted by the Secretary under subpart C of Part 170 Part II and Part III as stipulated in the Standards and Certification Criteria Final Rule.

The Proposer must provide evidence that verifies that the proposed EHR technology has been tested by an ONC-ATCB in accordance with the applicable certification criteria adopted by the Secretary of Health and Human Services (HHS), and certified by them to be compliant for ambulatory and inpatient practice settings.

The Proposer must identify each of the following for the (a) ambulatory product, and (b) inpatient product:

- the name of Proposer's EHR technology product and the product version number,
- the date of certification,
- the name of the certifying ONC-Authorized Testing and Certification Body (ONC-ATCB),
- the ONC certification number,
- whether Proposer's EHR technology product is a "Complete EHR" (a system that provides all certification functionality) or an "EHR Module" (a separate module that provides a component or components of certification functionality to be combined with other EHR products that, taken together, provide all certification functionality and meet the definition of Certified EHR Technology),
- in the event that Proposer's EHR technology product is an EHR Module (not a Complete EHR), identify which, if any, third party EHR technology products that Proposer currently anticipates, that when combined with Proposer's EHR Module, will interoperate, integrate, and meet the definition of "Certified EHR Technology," and
- list of the clinical quality measures with which the product was tested and certified as being compliant.

Proposer's response to Minimum Mandatory Requirements in Section 2.1 (ONC-ATCB Certified) is to be provided in the table below:

#	Minimum Mandatory Requirements	Ambulatory Product	Inpatient Product
2.1.1	The proposed EHR solution has been certified by an ONC-ATCB to be compliant for the applicable practice setting	Yes ☒ No ☐	Yes ☒ No ☐
2.1.2	Proposer has provided documentation verifying that the proposed EHR solution has been	Yes ☒ No ☐	Yes ☒ No ☐

#	Minimum Mandatory Requirements	Ambulatory Product	Inpatient Product
	certified by an ONC-ATCB as "**Attachment 2.1.2**"		
2.1.3	Name of Proposer's EHR technology product and the product version number	**PowerChart, Cerner Healthe, IQHealth, HealthSentry, and P2Sentinel** **Product Version Number Options:2007.19 and P2 4.2.1; 2010.01 and P2 4.2.1; 2010.02 and P2 4.2.1. CC-1112-657723-3**	**PowerChart, FirstNet, HealthSentry, and P2Sentinel** **Product Version Number Options: 2007.19 and P2 4.2.1; 2010.01 and P2 4.2.1; 2010.02 and P2 4.2.1. CC-1112-657723-4**
2.1.4	Date of certification	**10/27/2010**	**10/28/2010**
2.1.5	Name of the certifying ONC-Authorized Testing and Certification Body (ONC-ATCB)	**Certification Commission for Health Information Technology (CCHIT) http://www.cchit.org/**	**Certification Commission for Health Information Technology (CCHIT) http://www.cchit.org/**
2.1.6	ONC certification number	**CC-1112-657723-3**	**CC-1112-657723-4**
2.1.7	Please indicate whether Proposer's EHR technology product is a "Complete EHR" (a system that provides all certification functionality) or an "EHR Module" (a separate module that provides a component or components of certification functionality to be combined with other EHR products that, taken together, provide all certification functionality and meet the definition of Certified EHR Technology)	**Complete EHR** ☒ *or* **EHR Module** ☐ ***Check Only One***	**Complete EHR** ☒ *or* **EHR Module** ☐ ***Check Only One***
2.1.8	In the event that Proposer's EHR technology product is an EHR Module (not a Complete EHR), identify which, if any, third party EHR technology products that Proposer currently anticipates,	**Not Applicable**	**Not Applicable**

#	Minimum Mandatory Requirements	Ambulatory Product	Inpatient Product
	that when combined with Proposer's EHR Module, will interoperate, integrate, and meet the definition of "Certified EHR Technology."		
2.1.9	Please check all applicable clinical quality measures with which the product was tested and certified as being compliant.	☒ NQF 0001 Asthma Assessment ☐ NQF 0002 Pharyngitis – Children ☐ NQF 0004 Alcohol and Drug Dependence ☒ NQF 0012 Prenatal Care: HIV Screening ☒ NQF 0013 Hypertension: Blood Pressure Measurement ☐ NQF 0014 Prenatal Care: Anti-D immune Globulin ☒ NQF 0018 Controlling High Blood Pressure ☒ NQF 0024 Youth Weigh Assessment ☒ NQF 0027 Tobacco Use Cessation ☒ NQF 0028 Prevenitive Care: Tobacco Use Assessment and Cessation ☒ NQF 0031 Breast Cancer Screening ☐ NQF 0032 Cervical Cancer Screening ☒ NQF 0033 Chlamydia Screening for Women ☒ NQF 0034 Colorectal Cancer Screening ☒ NQF 0036 Appropriate Medications for Asthma ☒ NQF 0038 Childhood Immunization Status ☒ NQF 0041 Influenza Immunization ☒ NQF 0043 Pnemonia Vaccination ☒ NQF 0047 Asthma Pharmacologic Therapy ☐ NQF 0052 Use of Imaging Study: Low Back Pain ☐ NQF 0055 Diabetes: Eye Exam ☐ NQF 0056 Diabetes: Foot Exam	☐ NQF 0371 Venous Thromboembolism prophlaxis within 24 hours ☒ NQF 0372 Intensive Care Unit Venous Thromboembolism prophylaxis ☒ NQF 0373 Overlaping Anticoagulation therapy ☒ NQF 0374 Platelet Monitoring on Unfractionated Heparin ☒ NQF 0375 Venous Thromboembolism discharge instructions ☒ NQF 0376 Incidence of potentially preventable Venous Thromboembolism ☒ NQF 0435 Stroke: Discharge on anti-thrombotics ☒ NQF 0436 Ischemic Stroke-Anticoagulation for A-fib/flutter ☒ NQF 0437 Ischemic Stroke - Thrombolytic therapy ☒ NQF 0438 Ischemic or Hemorrhagic stroke-Antothrombotic therapy ☒ NQF 0439 Ischemic stroke-Discharge on statins ☒ NQF 0440 Ischemic or Hemorrhagic Stroke- Stroke education ☒ NQF 0441 Ischemic or Hemorrhagic Stroke-Rehabilitation assesment ☒ NQF 0495 Emergency Department Throughput - Arrival to Departure ☒ NQF 0497 Emergency Department Throughput - Admission to Inpatient

#	Minimum Mandatory Requirements	Ambulatory Product	Inpatient Product
		☒ NQF 0059 Diabetes Control: Hemoglobin A1c >9.0% ☒ NQF 0061 Diabetic Patients who elevated mmhg V140/90 ☐ NQF 0062 Nephropathy Screening- Urine ☒ NQF 0064 Diabetes Control: LDL < 100mg/dl ☒ NQF 0067 Antiplatelet Therapy ☒ NQF 0068 Ischemic Vascular Disease: Asparin or other Antithrombotic ☒ NQF 0070 Coronoary Artery Disease: Beta Blocker Therapy Post Myocadial Infarction ☒ NQF 0073 Blood Pressure Management: Ischemic Valve Disease ☐ NQF 0074 Corinary Artery Disease: Lipid Lowering Therapy ☐ NQF 0075 IVD: Complete Lipid Panel and LDL Control ☒ NQF 0081 Heart Failure: ACE/ ARB Therapy For LVSD (LVEF <40%) ☒ NQF 0083 Heart Failure: Beta Blocker for LVSD ☐ NQF 0084 Heart Failure: Warfarin Therapy ☒ NQF 0086 Primary Open Angle Glaucoma ☒ NQF 0088 Diabetic Retinopathy: Macular Edema ☒ NQF 0089 Diabetes Management: Retinopathy Screening ☐ NQF 0105 Depression Management ☐ NQF 0385 Colon Cancer: Chemotherapy ☐ NQF 0387 Breast Cancer: Hormonal Therapy ☐ NQF 0389 Prostate Cancer: Avoid overuse of Bone Scan ☒ NQF 0421 Adult Weight Screening ☐ NQF 0575 Diabetes Control: Hemoglobin A1c <8.0%	

2.2 COMPREHENSIVE

The Proposer must provide documentation and/or written responses that verify that 15 customers in the U.S. are using either the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support the following functionalities:

- Care Venues
  - Inpatient
  - Ambulatory specialty clinics
  - Ambulatory primary care practices
  - Emergency Department
  - Critical Care Units
  - Operating Room
- Ancillaries
  - Pharmacy
  - Laboratory
  - Radiology Information System (RIS) (this functionality does not include picture archiving and communication systems (PACS))
- Functionality
  - CPOE
  - Physician Documentation
  - Nursing Documentation
  - Admission, Discharge and Transfer
  - Scheduling
  - Registration
  - Full Cycle Medication Administration
  - Chronic Disease Management

Proposer's response to Minimum Mandatory Requirements in Section 2.2 (Comprehensive) is to be provided in the table below:

#	Minimum Mandatory Requirements	Yes	No
	Care Venues		
2.2.1	15 customers in the U.S. are using either the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	the proposed EHR Licensed Software to support inpatient functionality.		
2.2.1(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.1 as "**Attachment 2.2.1**".	☒	☐
2.2.2	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support ambulatory specialty clinics functionality.	☒	☐
2.2.2(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.2 as "**Attachment 2.2.2**".	☒	☐
2.2.3	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Ambulatory primary care practices functionality.	☒	☐
2.2.3(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.3 as "**Attachment 2.2.3**".	☒	☐
2.2.4	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Emergency Department functionality.	☒	☐
2.2.4(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.4 as "**Attachment 2.2.4**".	☒	☐
2.2.5	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Critical Care Units functionality.	☒	☐
2.2.5(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.5 as "**Attachment 2.2.5**".	☒	☐
2.2.6	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Operating	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	Room functionality.		
2.2.6(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.6 as "**Attachment 2.2.6**".	☒	☐
	Ancillaries		
2.2.7	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Pharmacy functionality.	☒	☐
2.2.7(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.7 as "**Attachment 2.2.7**".	☒	☐
2.2.8	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Laboratory functionality.	☒	☐
2.2.8(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.8 as "**Attachment 2.2.8**".	☒	☐
2.2.9	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Radiology Information System (RIS) functionality (this functionality does not include picture archiving and communication systems (PACS)).	☒	☐
2.2.9(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.9 as "**Attachment 2.2.9**".	☒	☐
	Functionality		
2.2.10	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support CPOE functionality.	☒	☐
2.2.10(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.10 as "**Attachment**	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	2.2.10".		
2.2.11	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Physician Documentation functionality.	☒	☐
2.2.11(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.11 as "**Attachment 2.2.11**".	☒	☐
2.2.12	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Nursing Documentation functionality.	☒	☐
2.2.12(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.12 as "**Attachment 2.2.12**".	☒	☐
2.2.13	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software, to support Admission, Discharge and Transfer functionality.	☒	☐
2.2.13(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.13 as "**Attachment 2.2.13**".	☒	☐
2.2.14	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Scheduling functionality.	☒	☐
2.2.14(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.14 as "**Attachment 2.2.14**".	☒	☐
2.2.15	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Registration functionality.	☒	☐

#	Minimum Mandatory Requirements	Yes	No
2.2.15(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.15 as "**Attachment 2.2.15**".	☒	☐
2.2.16	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Full Cycle Medication Administration functionality.	☒	☐
2.2.16(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.16 as "**Attachment 2.2.16**".	☒	☐
2.2.17	15 customers in the U.S. are using the current version of the proposed EHR Licensed Software or the version immediately preceding the current version of the proposed EHR Licensed Software to support Chronic Disease Management functionality.	☒	☐
2.2.17(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.2.17 as "**Attachment 2.2.17**".	☒	☐

2.3 INTEGRATED SOLUTION

The Proposer must provide documentation and/or written responses that verify that the EHR Licensed Software meets each of the following and is:

- Comprised of software components designed to work together using a single set of data integrity rules and constraints
- Using a common application infrastructure
- A single database supports the EHR Licensed Software such that the same data is shared directly, without copying, transfer, or exchange by all of the EHR Licensed Software modules across ambulatory and inpatient care venues
- Based on a common database schema
- Able to provide "one single source for truth" for patient information
- Capable of being deployed across ambulatory and inpatient care venues and geographically distributed facilities with a single underlying database
- Able to provide computable real time decision support based on operational and clinical meaning of relevant data regardless of the original care provider and the original source of the data

- Not using software, hardware, or software and hardware tools to provide data exchange among software components that were designed and developed separately with differing architectures, data structures, and user interfaces

Proposer's response to Minimum Mandatory Requirements in Section 2.3 (Integrated Solution) is to be provided in the table below:

#	Minimum Mandatory Requirements	Yes	No
2.3.1	Proposer's EHR Licensed Software is comprised of software components designed to work together using a single set of data integrity rules and constraints.	☒	☐
2.3.1(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.1 as "**Attachment 2.3.1**".	☒	☐
2.3.2	Proposer's EHR Licensed Software is using a common application infrastructure.	☒	☐
2.3.2(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.2 as "**Attachment 2.3.2**".	☒	☐
2.3.3	Proposer's EHR Licensed Software has a single database that supports the EHR Licensed Software such that the same data is shared directly, without copying, transfer, or exchange by all of the EHR Licensed Software modules across all care venues.	☒	☐
2.3.3(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.3 as "**Attachment 2.3.3**".	☒	☐
2.3.4	Proposer's EHR Licensed Software is based on a common database schema.	☒	☐
2.3.4(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.4 as "**Attachment 2.3.4**".	☒	☐
2.3.5	Proposer's EHR Licensed Software is able to provide "one single source for truth" for patient information.	☒	☐
2.3.5(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.5 as "**Attachment 2.3.5**".	☒	☐
2.3.6	Proposer's EHR Licensed Software is capable of being deployed across ambulatory and inpatient care venues and geographically distributed facilities with a single underlying database.	☒	☐
2.3.6(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	been in production at 10 hospital systems for the last five (5) years including a successful history of migration to newer releases.		
2.5.2(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.5.2 as "**Attachment 2.5.2**".	☒	☐
2.5.3	A version of Proposer's EHR Licensed Software has been in production at 10 hospital systems for the last five (5) years including a successful history of expansion to additional modules and functionality.	☒	☐
2.5.3(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.5.3 as "**Attachment 2.5.3**".	☒	☐
2.5.4	Proposer is currently providing ongoing support for its EHR Licensed Software (or a version of the EHR Licensed Software) to 3 organizations with similar size and complexity to the Los Angeles County Department of Health Services (LA DHS).	☒	☐
2.5.4(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.5.4 as "**Attachment 2.5.4**".	☒	☐

2.6 MARKET PENETRATION AND MOMENTUM

The Proposer must provide documentation and/or written responses that verify that the proposed EHR Licensed Software has the following market penetration:

- At least 10 net new contracts between July 2009 and the present for its EHR Licensed Software or its immediate predecessor version (net new contracts does not include any renewals of existing maintenance and support agreements)
- Currently have at least 75 contracts in 200 sites/hospitals for physician documentation, nursing documentation, and CPOE

Proposer's response to Minimum Mandatory Requirements in Section 2.6 (Market Penetration and Momentum) is to be provided in the table below:

#	Minimum Mandatory Requirements	Yes	No
2.6.1	Proposer has at least 10 net new contracts between July 2009 and the present (net new contracts does not include any renewals of existing maintenance and support agreements) for the proposed EHR Licensed	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	Software or its immediately predecessor version.		
2.6.1(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.6.1 as "**Attachment 2.6.1**".	☒	☐
2.6.2	Proposer currently has at least 75 contracts in 200 sites/hospitals for physician documentation, nursing documentation, and CPOE for the proposed EHR Licensed Software or a prior version of the Licensed Software.	☒	☐
2.6.2(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.6.2 as "**Attachment 2.6.2**".	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	Mandatory Requirement #2.3.6 as "**Attachment 2.3.6**".		
2.3.7	Proposer's EHR Licensed Software is able to provide computable real time decision support based on operational and clinical meaning of relevant data regardless of the original care provider and the original source of the data.	☒	☐
2.3.7(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.7 as "**Attachment 2.3.7**".	☒	☐
2.3.8	Proposer's EHR Licensed Software is not using software or hardware tools to provide data exchange among software components that were designed and developed separately with differing architectures, data structures, and user interfaces.	☒	☐
2.3.8(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.3.8 as "**Attachment 2.3.8**".	☒	☐

2.4 IMPLEMENTATION TRACK RECORD

The Proposer must provide documentation and/or written responses that verify that the proposed EHR Licensed Software has the following implementation track record:

- At least 15 fully implemented sites in the United States using either the current version of the EHR Licensed Software, or the version immediately preceding the current version of the EHR Licensed Software
- 3 Academic Medical Centers using either the current, or one prior version of the EHR Licensed Software
- 3 public sector (state, county, or municipal) hospitals using either the current, or one prior version of the EHR Licensed Software

Proposer's response to Minimum Mandatory Requirements in Section 2.4 (Implementation Track Record) is to be provided in the table below:

#	Minimum Mandatory Requirements	Yes	No
2.4.1	Proposer's EHR Licensed Software has at least 15 fully implemented sites in the United States using either the current version of the EHR Licensed Software, or the version immediately preceding the current version of the EHR Licensed Software.	☒	☐
2.4.1(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum	☒	☐

#	Minimum Mandatory Requirements	Yes	No
	Mandatory Requirement #2.4.1 as "**Attachment 2.4.1**".		
2.4.2	Proposer's EHR Licensed Software has 3 Academic Medical Centers using either the current, or one prior version of the EHR Licensed Software.	☒	☐
2.4.2(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.4.2 as "**Attachment 2.4.2**".	☒	☐
2.4.3	Proposer's EHR Licensed Software has 3 public sector (state, county, or municipal) hospitals using either the current, or one prior version of the EHR Licensed Software.	☒	☐
2.4.3(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.4.3 as "**Attachment 2.4.3**".	☒	☐

2.5 SUPPORT TRACK RECORD

The Proposer must provide documentation and/or written responses that verify that the proposed EHR Licensed Software has the following support track record:

- The proposed EHR Licensed Software has been in production at 10 hospital systems for the last five (5) years including
  - Successful history of migration to newer releases
  - Successful history of expansion to additional modules and functionality
- The Proposer is currently providing ongoing support for its EHR Licensed Software (or a version of the EHR Licensed Software) to 3 organizations with similar size and complexity to the Los Angeles County Department of Health Services (LA DHS)

Proposer's response to Minimum Mandatory Requirements in Section 2.5 (Support Track Record) is to be provided in the table below:

#	Minimum Mandatory Requirements	Yes	No
2.5.1	A version of Proposer's EHR Licensed Software has been in production at 10 hospital systems for the last five (5) years.	☒	☐
2.5.1(a)	Proposer has provided documentation and/or written responses that verify its response to Minimum Mandatory Requirement #2.5.1 as "**Attachment 2.5.1**".	☒	☐
2.5.2	A version of Proposer's EHR Licensed Software has	☒	☐

The undersigned below represents and warrants that he/she is authorized to make representations for Proposer, that the representations are true and correct, and that he/she is authorized to sign for and on behalf of Proposer. Proposals signed by other than the owner of a sole proprietorship, an authorized officer of a corporation, an authorized general partner of a general or limited partnership, or a manager or managing member of a limited liability company must include a power of attorney authorizing the signature.

Proposer's Company Name: Cerner
Signed by: Marc Naughton
Print Name: Marc Naughton
Title: EVP & Chief Financial Officer
Date: 12/09/2011
Address: 2800 Rockcreek Parkway
North Kansas City, MO 64117

E-mail: mnaughton@cerner.com
Telephone: 816-201-1989
Fax: 816-571-1989

Exhibit X (County Key Employees)

to the

Electronic Health Records System and Services Agreement

EXHIBIT X

COUNTY KEY EMPLOYEES

The following table sets forth the County's Key Employees as of the Effective Date. Except as provided in this Exhibit, capitalized terms shall have the meanings set forth in the body of the Agreement and Exhibit G (Glossary).

Key Employee Name	Project Title
Mitchell H. Katz, M.D.	DHS Director
Roger J. Lewis, M.D.	Senior EHR Project Advisor
[To be named]	County Project Director
Kevin Lynch	DHS CIO
[To be named]	County Project Manager

Pursuant to Section 32.3(c)(i) (Notices) of the Agreement, the County Project Director will be located at the following address:

[To be identified]

Exhibit Y (Contractor Diligence – Information Security Questionnaire)

to the

Electronic Health Records System and Services Agreement

Contractor Diligence and Information Security Questionnaire

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Proprietary and Confidential

Proprietary and Confidential

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Exhibit Z (Pre-Approved Subcontractors)

to the

Electronic Health Records System and Services Agreement

EXHIBIT Z

PRE-APPROVED SUBCONTRACTORS

This Exhibit Z (Pre-Approved Subcontractors) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

As provided in Section 2.1 (Contractor; Subcontracting) of the Agreement, no performance of the Agreement, or any portion thereof, shall be subcontracted by Contractor without the prior written consent of County as provided in Section 2.1 (Contractor; Subcontracting) of the Agreement, which consent shall not be unreasonably withheld or delayed. The following subcontractors that have been pre-Approved by County:

No subcontractors have been added to this Exhibit as of the Effective Date.

Exhibit AA (Hardware Subcontractors Exempt from Approval)

to the

Electronic Health Records System and Services Agreement

EXHIBIT AA

HARDWARE SUBCONTRACTORS EXEMPT FROM APPROVAL

This Exhibit AA (Hardware Subcontractors Exempt from Approval) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

As provided in Section 2.1 (Contractor; Subcontracting) of the Agreement, County's prior written consent shall not be required prior to Contractor subcontracting with any of the following third-party manufacturers of any Hardware for purposes of providing maintenance and support, provided that (a) such third-party manufacturers are not required to come onsite to any County Facility or access any patient records for purposes of providing such maintenance and support, (b) no staff of such third-party manufacturers are named in or otherwise dedicated to this Agreement, and (c) Contractor invoices County as part of the Contract Sum directly for any and all services provided by such third-party manufacturers:

1. Brocade Communications Systems, Inc.
2. Cisco Systems, Inc.
3. Data Span
4. EMC
5. Harland Technology Services.
6. Hewlett-Packard Company.
7. International Business Machines Corporation.
8. NetApp

Exhibit BB (County-Approved Contractor Entities and Countries)

to the

Electronic Health Records System and Services Agreement

EXHIBIT BB

COUNTY-APPROVED ENTITIES AND COUNTRIES

This Exhibit BB (County-Approved Entities and Countries) is an attachment and addition to the Electronic Health Records System and Services Agreement dated December 21, 2012 (the "**Agreement**") entered into by and between the County of Los Angeles ("**County**") and Cerner Corporation ("**Contractor**") and is incorporated into the Agreement by reference hereof. Unless specifically defined in this Exhibit, capitalized terms shall have the meanings set forth in the Agreement.

1. **County-Approved Entities**. As provided in Section 2.1 (Contractor; Subcontracting) of the Agreement, unless specifically authorized by County as provided in the Agreement, Contractor shall perform the obligations described in this Agreement and in the Statement(s) of Work itself, and through the following direct wholly-owned subsidiaries:

   (a) Cerner Galt, Inc.

   (b) Cerner Healthcare Solutions, Inc.

   (c) Cerner Innovation, Inc.

   (d) Cerner Multum, Inc.

2. **County-Approved Entities and Countries.** As provided in Section 17.1.15 (No Offshore Work) of the Agreement, all Hosting Services shall be performed and rendered within the United States. Contractor warrants that it will not transmit or make available any of County's Confidential Information, County's intellectual property or any County Property to any entity or individual outside the United States without prior written County Approval of such transmittal to an entity or person outside of the United States. County has Approved transmittal of such information to the entities in Section 1 (County-Approved Entities) of this Exhibit while operating in the following countries:

   (a) Ireland.

   (b) India.

Exhibit CC (Enterprise Back-up Policy)

to the

Electronic Health Records System and Services Agreement

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Proprietary and Confidential

Exhibit DD (Form Subcontractor Agreement)

to the

Electronic Health Records System and Services Agreement

AGREEMENT REGARDING SUBCONTRACTED SERVICES

THIS AGREEMENT REGARDING SUBCONTRACTED SERVICES, dated as of [_____] [__], 20[__] (as together with all exhibits, all as amended from time to time in accordance with the terms and conditions hereof, this "**Agreement**"), is entered into between Cerner Corporation, a Delaware corporation ("**Prime Contractor**"), and [insert subcontractor's legal name], a [insert state of incorporation] corporation ("**Subcontractor**"), and is made in reference to the Electronic Health Records System and Services Agreement, Los Angeles County Contract No. [_____], dated as of December 21, 2012, for an Electronic Health Records System and Services (together with all exhibits and attachments, all as amended from time to time in accordance with the terms and conditions thereof, the "**Prime Agreement**"), between Prime Contractor and the County of Los Angeles ("**County**"). Capitalized terms used herein (including in this introductory paragraph) without definition shall have the meanings given to such terms in the Prime Agreement.

WHEREAS, County and Prime Contractor have entered into the Prime Agreement pursuant to which Prime Contractor, in its capacity as "Contractor" thereunder, will provide all elements of the EHR System, including the Licensed Software, Third-Party Products, Integral Third-Party Software, Hosting Software, Hardware, and Services including, Implementation Services, Hosting Services, Support Services, and any Optional Work (the "**Work**") under and as defined in the Prime Agreement;

WHEREAS, Prime Contractor desires to engage Subcontractor to provide a subset of such Work, the scope of which Work is further described in the attached Exhibit B (Subcontracted Work) (as the same may be amended from time-to-time in accordance with the terms and conditions hereof, "**Subcontracted Work**"); and

WHEREAS, Prime Contractor and Subcontractor desire to set forth below the terms and conditions under which Subcontractor will perform the Work described in the attached Exhibit B (Subcontracted Work) and to make County a third-party beneficiary of this Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is acknowledged, Prime Contractor and Subcontractor agree as follows:

1. Incorporation of Terms and Conditions of the Prime Agreement. Prime Contractor and Subcontractor agree that, to the extent of, and with respect to, Subcontractor's provision of the Subcontracted Work:

(a) With respect solely to those terms and conditions of the Prime Agreement set forth in the attached Exhibit A (Specified Additional Terms and Conditions), such terms and conditions are hereby incorporated by this reference as if set forth herein, Subcontractor agrees to be bound by such terms and conditions directly to County as if Subcontractor were the "Contractor" under the Prime Agreement, and County shall have all of the rights and remedies under the Prime Agreement of "County" under the Prime Agreement, except that (1) the scope of Work to be performed by Subcontractor shall be the Subcontracted Work, (2) the amount of any payments paid or payable to Subcontractor for the performance of such Subcontracted Work shall be solely as determined between Prime Contractor and Subcontractor, and (3) the payment process for

the payments to Subcontractor shall be solely as determined between Prime Contractor and Subcontractor.

Except with respect to the exceptions set forth in Section 1 above, in the event of any conflict or inconsistency between the terms and conditions of (A) the Prime Agreement or any exhibit or attachment thereto, and (B) the attached Exhibit B (Subcontracted Work), such conflict or inconsistency shall be resolved by giving precedence first to the terms and conditions of the Prime Agreement and any exhibits and attachments thereto, and then to the terms and conditions of the attached Exhibit B (Subcontracted Work).

2. Agreement Regarding Subcontracted Work. Subcontractor agrees to provide the Subcontracted Work to County on behalf of Prime Contractor in accordance with the terms and conditions of this Agreement. Subcontractor agrees and represents and warrants that: (a) Prime Contractor shall be solely liable and responsible to Subcontractor for payment of any and all payments and other compensation due under this Agreement, (b) Subcontractor is qualified to perform the work for which Subcontractor has been hired, and (c) Subcontractor shall be solely liable and responsible for any and all of its taxes, payments and other compensation due, including compensation to its employees and agents, arising out of Subcontractor's performance of the Subcontracted Work.

Exhibit B (Subcontracted Work) shall set forth the following details with regard to the Subcontracted Work: (i) the scope of Subcontracted Work, (ii) the reason(s) for the particular subcontract, (iii) an explanation of why and how the proposed subcontractor was selected, and (iv) the confidentiality provisions applicable to the proposed subcontractor's officers, employees, and agents, which would be incorporated into the subcontract.

The following documents shall be executed by the Subcontractor and attached hereto as Exhibits: (1) certificates of insurance from the proposed subcontractor, which establish that the subcontractor maintains the minimum programs of insurance required by County and set forth in the Prime Agreement; (2) an executed Confidentiality and Assignment Agreement substantially similar to the Confidentiality and Assignment Agreement attached as Exhibit D (Confidentiality and Assignment Agreement), (3) to the extent such subcontractor will have access to PHI, an executed Business Associate Agreement substantially similar to Exhibit E (Prime Contractor's Business Associate Agreement with Subcontractor), (4) an executed EEO Certification substantially similar to Exhibit F (Subcontractor's EEO Certification) , (5) Exhibit G (Safely Surrendered Baby Law), and (6) any other standard County required agreements, forms, and provisions attached as Exhibit H (Additional Provisions) or as agreed to in writing by the Parties.

3. County as Third-Party Beneficiary. Prime Contractor and Subcontractor agree that this Agreement is entered into for the benefit of County and that County expressly is made a third-party beneficiary of this Agreement. Accordingly, at any time and from time-to-time, County may compel Prime Contractor to enforce against Subcontractor and on County's behalf, any and all rights and remedies Prime Contractor may have with respect to Subcontractor's breach of this Agreement.

4. Representations and Warranties. Each of Prime Contractor and Subcontractor represents and warrants to the other party (and to County as third-party beneficiary under this Agreement) that this Agreement has been duly authorized, executed, and delivered by such party, and that such party has all necessary corporate power and authority to enter into this Agreement and to perform its respective obligations under this Agreement.

5. Amendments. Notwithstanding anything to the contrary in this Agreement, no amendment, modification, termination or waiver of any provision of this Agreement (including the exhibits attached hereto) shall be effective unless the same shall be in writing, signed by Prime Contractor and Subcontractor, and acknowledged by County. Notwithstanding anything to the contrary in this Agreement, Subcontractor expressly acknowledges and agrees the Prime Agreement may be amended, modified and/or terminated and provisions of the Prime Agreement may be waived without prior notice to or consent of Subcontractor.

6. Assignment. Except as set forth in Section 32.17.1 (Assignment by Contractor) of the Prime Agreement, neither party may assign its rights and obligations under this Agreement (including the exhibits attached hereto) without prior written consent of the other party and prior written acknowledgement of County.

7. Effect on Prime Agreement. Except as expressly set forth in Section 1(a) hereto, as between Prime Contractor and Subcontractor, nothing contained herein shall be construed as amending or modifying in any fashion any term or condition set forth in the Prime Agreement or any exhibit, schedule, attachment or appendix thereto. Prime Contractor expressly ratifies and affirms its rights and obligations under the Prime Agreement.

8. Counterparts. This Agreement may be executed in any number of original or facsimile counterparts, each of which when taken together shall constitute an original.

9. Governing Law. This Agreement shall be governed by, and construed in accordance with, the substantive and procedural laws of the state of California applicable to agreements made and to be performed within that state.

IN WITNESS WHEREOF, Prime Contractor and Subcontractor have caused this Agreement to be executed as of the day and year first above written.

CERNER CORPORATION, as Prime Contractor

By: _____
Name:
Title:

[_____], as Subcontractor

By: _____
Name:
Title:

Exhibit A

Specified Additional Terms and Conditions

Unless otherwise specified, Section references are to Sections of the Prime Agreement. With respect to the terms and conditions of the Prime Agreement referenced below, Subcontractor further agrees, to be bound by such terms and conditions directly to County as if Subcontractor were the "Contractor" under the Prime Agreement, and County shall have all of the rights and remedies under the Prime Agreement of "County" under the Prime Agreement.

- Section 2.1 (Contractor; Subcontracting)
- Section 9.10 (Contractor Access To County Facilities)
- Section 10.1.5 (Conduct Of Contractor Personnel)
- Section 15.14 (Verification Of Licensee Costs By Government)
- Section 16 (Independent Contractor)
- Section 17.1.2 (Performance Of Services)
- Section 17.1.8 (Destructive/Disabling Mechanisms)
- Section 17.1.19 (Excluded Provider Warranty)
- Section 17.1.20 (Warranty Against Contingent Fees)
- Section 19 (Confidentiality)
- Section 23 (Indemnification)
- Section 25 (Insurance)
- Section 27 (Dispute Resolution Procedures)
- Section 28 (Dispute Resolution with Contractor and Other Vendors)
- Section 29 (Termination)
- Section 30 (Multi-Vendor Environment)
- Section 32.1 (Force Majeure)
- Section 32.8 (Compliance with Applicable Laws)
- Section 32.9 (Required Certifications)
- Section 32.10 (Compliance With Civil Rights Laws)
- Section 32.11 (Nondiscrimination and Affirmative Action)
- Section 32.23 (Recycled Bond Paper)
- Section 32.26 (Public Records Act)
- Section 32.27 (Conflict of Interest)
- Section 32.28 (Contractor Responsibility and Debarment)
- Section 32.30 (Employment Eligibility Verification)

- Section 32.31 (Compliance with the County's Jury Service Program)
- Section 32.33 (Consideration of Hiring GAIN/GROW Program Participants)
- Section 32.34 (Contractor's Warranty of Adherence to County's Child Support Compliance Program)
- Section 32.35 (Safely Surrendered Baby Law)
- Section 32.36 (Federal Earned Income Tax Credit)
- Section 32.37 (Defaulted Property Tax Reduction Program)
- Section 32.38 (Restrictions on Lobbying)
- Section 32.40 (Contractor Performance During Civil Unrest and Disaster)
- Exhibit R (Confidentiality and Assignment Agreement) of the Prime Agreement

Exhibit B

Subcontracted Work

[Prime Contractor and Subcontractor to complete]

1. Scope of Subcontracted Work

2. Reason(s) for the particular subcontract:

3. Explanation of why and how the proposed subcontractor was selected:

4. Incorporated confidentiality provisions applicable to the proposed subcontractor's officers: employees, and agents:

5. Other pertinent information and/or certifications requested by County:

Exhibit C

Subcontractor Certificates of Insurance

Exhibit D

Confidentiality and Assignment Agreement

Exhibit E

Prime Contractor's Business Associate Agreement with Subcontractor

Exhibit F

Subcontractor's EEO Certification

Exhibit G

Safely Surrendered Baby Law

Exhibit H

Additional Provisions

Exhibit EE (Interoperability Functionality)

to the

Electronic Health Records System and Services Agreement

Contractor's offering to County includes, at no charge, an interoperability toolkit to be used under the Existing Agreements and which comprises solutions, including software and services, that will allow the various County organizations, using Contractor's EHR to query and respond with patient documents automatically to:

1. LAC DHS EHR System, Sheriff Jail Health Information System ("**JHIS**"), Probation Electronic Medical Record System ("**PEMRS**")
2. LANES, if it complies with national connectivity standards - Integrating the Healthcare Enterprise ("**IHE**") standard profiles, and Cross Community Access ("**XCA**") Gateway standards.
3. other Contractor clients EHR systems

The following capabilities would require payment of additional fees:

1. Pushing of patient data from JHIS and PEMRS to LANES HIE;
2. If LANES does not use the national interoperability standards described above; or
3. Connecting to HIEs other than LANES, and the ability to connect to an HIE that does not use the national interoperability standards described above.

Contractor refers to the solution it is providing at no charge as set forth in this Exhibit EE (Interoperability Functionality) as the "Clinical Exchange Network."

Exhibit FF (Independent Conditions)

to the

Electronic Health Records System and Services Agreement

SURESCRIPTS END USER AGREEMENT

The following provisions shall be included in any End User Agreement, and SureScripts shall be a third party beneficiary thereof:. If there is any conflict between the Agreement between End User and Cerner Corporation ("EHR Agreement") the EHR Agreement shall control.
The following are and shall be referred to as the Certification Guidelines. End User shall not use, alter, or modify the SureScripts Messenger Service in any manner that would encourage a physician or a patient to prescribe or use a specific pharmaceutical, or to use a specific pharmacy, as compared to other pharmaceuticals or pharmacies. End User shall not use any means, program, or device, or knowingly permit any other person to use any means, program, or device, including, but not limited to, advertising, instant messaging, and pop up ads, to influence or attempt to influence, through economic incentives or otherwise, the prescribing decision, as defined below, of a physician at the point of care, as defined below, or make more difficult the act of a physician or patient of selecting any particular pharmacy or pharmaceutical as compared to any other pharmacy or pharmaceutical if (i) such means, program, or device (as described above) is triggered by, initiated by, or is in specific response to, the input, selection, and/or act of a physician or his/her agent prescribing a pharmaceutical or selecting a pharmacy for a patient and (ii) that prescription will be delivered via the SureScripts Messenger Service. "Prescribing decision" means a physician's decision to prescribe a certain pharmaceutical or direct the patient to a certain pharmacy. Point of care shall mean the time that a physician or his/her agent is in the act of prescribing a pharmaceutical for a patient.

Notwithstanding the above, End User may use software that (A) shows information regarding a payer's formulary and benefit plan design, including patient lowest cost options, on/off tier, prior authorization, step therapy, coverage status and co-pay information, and/or (B) deliver or have delivered to End Users clinical alerts that are sourced from and are attributed to generally recognized and reputable sources providing clinical information to the prescribing physician, so long as no person or entity provides any compensation or remuneration to Aggregator for the delivery of such clinical alerts, even if, in the event of either (A) or (B), such information influences the patient or physician's choice of pharmacy or other prescribing decisions, so long as (i) the End User may access all pharmaceuticals known through generally available sources used in the industry, and all pharmacies, including all retail and mail service pharmacy options available, and (ii) nothing is designed to preclude a physician or patient from selecting any particular pharmacy or pharmaceutical. Any custom lists created and maintained by End Users within Aggregator's software product including but not limited to (i) an individual End User's most often prescribed medication lists, (ii) an individual End User's most often used pharmacy list, (iii) an individual End User's most often used SIGs (i.e., instructions for the use of medications), would not be considered a violation of this paragraph. In addition, to the extent that the Medicare Modernization Act, or any successor act, or any regulations promulgated thereunder, specifically authorize delivery of information to a physician at the point of care, such delivery in compliance with such law or regulation shall not be deemed a breach of this provision.

End User acknowledges that the SureScripts Messenger Service is not intended to serve as a replacement for (i) a written prescription where it is required by law or where such written prescription is required for record keeping purposes, or (ii) applicable prescription documentation. End User acknowledges that use of the SureScripts Messenger Service is not a substitute for a health care provider's standard practice or professional judgment. Any decision with regard to the appropriateness of treatment, or the validity or reliability of information is the sole responsibility of the End User.

MPages Development Toolkit

The provisions set forth below apply to the MPages Licensed Software and MPages Toolkit) licensed under this Cerner System Schedule. In the event there is any conflict between this Attachment X and the Electronic Health Records System and Services Agreement between the County of Los Angeles ("Client") and Cerner, (the "EHR Agreement"), the terms of the EHR Agreement shall control.

1. Definitions. For purposes of this Attachment X, these terms have the following meanings:

1.1 "**Customized Data Presentation Component**" means any data presentation component(s) developed solely by Client using the MPages Toolkit.

1.2 [Intentionally Deleted]

1.3 "**MPages Toolkit**" means the commercially available toolkit with the MPages trademark that is delivered with the MPages Licensed Software.

1.4 [Intentionally Deleted]

2. License

2.1 The MPages Toolkit is Integral Licensed Software as set forth in the EHR Agreement.

2.2 [Intentionally Deleted]

2.3 [Intentionally Deleted]

2.4 Cerner also grants to Client a non-exclusive, non-transferable license to use the Work Product supplied to Client by Cerner in connection with the use of the EHR System as set forth in the Electronic Health Records System and Services Agreement by and between Customer and Cerner

3. [Intentionally Deleted]

4. General

4.1 Client assumes all responsibility for the Customized Data Presentation Component.

4.2 Client acknowledges and agrees that Cerner will not Support, certify or localize any Customized Data Presentation Component.

SCHEDULE 3 SYNTEGRITY™ STANDARDIZED PERIOPERATIVE FRAMEWORK CONTENT END USER TERMS

1. DEFINITIONS

1.1 "AORN" means the Association of Perioperative Registered Nurses, the owners of the Syntegrity Standardized Perioperative Framework and Companion Guide being licensed by End User hereunder.

1.2 "Companion Guide" means a web-based adjunct to the Syntegrity Standardized Perioperative Framework (SPF), providing clinical resources , technical specifications and related clinical workflow and data. This guide supports understanding of the SPF and benefits associated with the integration of the data record set into perioperative information systems for the health care clinician, vendor clinical nursing and technical specialist.

1.3 "CSC" means Computer Sciences Corporation.

1.4 "End User" means County of Los Angeles, licensee of the Syntegrity Standardized Perioperative Framework and Companion Guide as resold and sublicensed by Cerner Corporation.

1.5 "Syntegrity Standardized Perioperative Framework" means the referenced data set, including the XML schema and its content value set in XML data files.

1.6 "Use" means use of the Syntegrity Standardized Perioperative Framework by End User with the EHR System in accordance with the Electronic Health Records System and Services Agreement by and between End User and Cerner (the "EHR Agreement").

2. GRANT OF LICENSE AND END USER RESTRICTIONS

2.1 License Grant. AORN hereby grants to End User, and End User hereby accepts a limited, non-assignable, non-exclusive, non-transferable license to: (i) Use the Syntegrity Standardized Perioperative Framework; and (ii) access and use the Companion Guide solely in connection with the EHR System as set forth in the EHR Agreement.

2.2 License Restrictions.

A. The Syntegrity Standardized Perioperative Framework is licensed to End User for its use with the EHR System in accordance with the EHR Agreement between Client and Cerner. Except as provided in the EHR Agreement, End User shall not, nor shall it permit any third party to: (i) offer for sale, sell, lease, license, sublicense or encumber the Syntegrity Standardized Perioperative Framework or Companion Guide; (ii) decompile, disassemble, reverse engineer or otherwise attempt to derive all or any portion of the Syntegrity Standardized Perioperative Framework; ; (iv) modify the Syntegrity Standardized Perioperative Framework,; or (vi) use the Syntegrity Standardized Perioperative Framework or Companion Guide in any way other than as expressly granted in Section 2.1 above.

B. The Syntegrity Standardized Perioperative Framework, the Companion Guide and all intellectual property rights therein are owned by AORN and CSC has an exclusive right to license the Syntegrity Standardized Perioperative Framework, the Companion Guide on AORN's behalf. The Syntegrity Standardized Perioperative Framework and Companion Guide are protected by U.S. copyright laws. AORN may, at any time and at its sole election, replace, modify, alter, improve, enhance or change the Syntegrity Standardized Perioperative Framework and Companion Guide. Further, the license of Syntegrity Standardized Perioperative Framework and Companion Guide is not a sale and does not transfer to End User any title or ownership interest in or to the Syntegrity Standardized Perioperative Framework and Companion Guide or any patent, copyright, trade secret, trade name, trademark or other proprietary intellectual property right related to the Syntegrity Standardized Perioperative Framework and Companion Guide. Except for the limited rights granted in Section 2.1, AORN retains all right, title, and interest in and to the Syntegrity Standardized Perioperative Framework and Companion Guide.

C. End User acknowledges that the Licensed Syntegrity Standardized Perioperative Framework and Companion Guide constitute valuable trade secrets of AORN. All rights in and to the Syntegrity Standardized Perioperative Framework and Companion Guide not expressly granted to End User by this Agreement are reserved by CSC or AORN. End User shall not print screens, take pictures of screens or otherwise convey the content of any portion of the Syntegrity Standardized Perioperative Framework, the Companion Guide to any third party; provided, however, End User may make copies of select screens of the Syntegrity Standardized Perioperative Framework and Companion for use in internal training materials, trouble shooting, and for educational purposes only.

3. SUPPORT

3.1 Updates. The Syntegrity Standardized Perioperative Framework and Companion Guide are periodically updated by CSC and AORN (each an "Update") to keep current with changes in regulations, accreditation standards, recommended practices and standards. Periodically these Updates shall be released to Cerner Corporation to facilitate updates to End Users.

4. CONFIDENTIAL INFORMATION

4.1 Nondisclosure of Confidential Information. All parties acknowledge that the Confidential Information obtained by another party pursuant to use of the Syntegrity Standardized Perioperative Framework and Companion Guide constitutes valuable trade secrets of the disclosing party. All parties agree that they shall undertake reasonable efforts to protect the secrecy of, and avoid disclosure and unauthorized use of, the Confidential Information of any other party. Without limiting the foregoing, each party shall take at least those measures that it takes to protect its own most highly confidential information.

5. WARRANTY

AORN warrants that to the best of its knowledge that the Syntegrity Standardized Perioperative Framework and Companion Guide is true, accurate and up-to-date at the time of its release to Cerner Corporation, is compiled consistent with widely accepted industry practices and has been developed and reviewed based upon published data and the experiences of qualified professionals. OTHER THAN THE FOREGOING WARRANTY(IES), THE SYNTEGRITY STANDARDIZED PERIOERATIVE FRAMEWORK AND COMPANION GUIDE ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND AND NEITHER CSC NOR AORN MAKE ANY WARRANTIES OR CONDITIONS TO END USER OR ANY OTHER THIRD PARTY, WHETHER EXPRESS, STATUTORY, IMPLIED, OR OTHERWISE. AORN AND CSC EACH DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT WITH RESPECT TO THE REFERENCED DATA SET AND DOCUMENTATION, AND WITH RESPECT TO THE USE OF ANY OF THE FOREGOING.

6. INDEMNITY

6.1 Non-Infringement Indemnity. AORN shall defend and hold End User harmless from any third party claim, action or proceeding brought against End User alleging that the Syntegrity Standardized Perioperative Framework and/or Companion Guide as delivered to End User and used as authorized in these Content End User Terms, infringes any copyright or trade secret or trademark right of a third party and AORN shall pay any final judgments awarded or settlements entered into; provided that the End User provides AORN with: (a) prompt written notice of such claim; (b) sole control over the defense and settlement of such claim; and (c) all necessary information and assistance (at AORN's expense) to defend and/or settle such claim. End User may participate in the defense of a claim asserted hereunder after AORN has assumed the defense or settlement, provided that End User shall bear any legal fees and expenses or other costs it incurs in so participating. AORN and shall not be liable for any costs or expenses incurred without its prior written authorization.

6.2 Limit on Indemnity. Notwithstanding the foregoing, AORN will have no liability for infringement claims arising from: (a) combination of the Syntegrity Standardized Perioperative Framework with other referenced data sets or products not provided by AORN, which claim would have been avoided if the Syntegrity Standardized Perioperative Framework had not been so combined; (b) the unauthorized modification of the Syntegrity Standardized Perioperative Framework, in whole or in part, by anyone other than AORN and CSC; or (c) use by End User of any specified release of the Syntegrity Standardized Perioperative Framework after AORN or CSC notifies End User that continued use may subject End User to such claim of infringement, provided AORN provides End User with a replacement release.

6.3 Entire Liability. THE FOREGOING STATES THE ENTIRE LIABILITY AND OBLIGATION OF AORN, AND THE SOLE AND EXCLUSIVE REMEDY OF LICENSEE WITH RESPECT TO ANY ACTUAL OR ALLEGED INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT BY THE SYNTEGRITY STANDARDIZED PERIOPERATIVE FRAMEWORK AND COMPANION GUIDE.

7. TERM; TERMINATION

7.1 Term. The term of the license grant as described in Section 2.1 shall be determined by the EHR Agreement.

7.2 AORN's and CSC's Right to Terminate. Notwithstanding Section 7.1, AORN and CSC reserve the right to terminate the license grant as described in Section 2.1 in accordance with terms of the EHR Agreement if End User materially violates one of the restricted uses as described in Section 2.2.

8. LIMITATIONS OF LIABILITY

8.1 Consequential Damages. EXCEPT FOR A BREACH OF SECTION 2.2 OR SECTION 4 OR AS OTHERWISE PROVIDED IN ARTICLE 6, IN NO EVENT SHALL EITHER PARTY (EXCLUDING CERNER) HAVE ANY LIABILITY IN CONNECTION WITH

THE SYNTEGRITY LICENSE FOR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING LOSS OF DATA, LOST PROFITS, OR COST OF COVER, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER FOR BREACH OF WARRANTY OR CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, ARISING OUT OF OR RELATED TO THESE ARRANGEMENTS, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NOTWITHSTANDING THE FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY STATED HEREIN.

8.2 Direct Damages. EXCEPT FOR A BREACH OF SECTION 4 OR AS OTHERWISE PROVIDED IN ARTICLE 6, IN NO EVENT SHALL AORN'S OR CSC'S TOTAL LIABILITY EXCEED THE AMOUNTS ACTUALLY PAID BY END USER TO CERNER CORPORATION IN CONNECTION WITH THE SYNTEGRITY LICENSE. IN NO EVENT SHALL AORN OR CSC HAVE ANY LIABILITY WHATSOEVER FOR ANY USE BY END USER OF THE SYNTEGRITY STANDARDIZED PERIOPERATIVE FRAMEWORK OR ANY ACTIONS TAKEN IN RELIANCE ON THE CONTENT DERIVED THEREFROM.

SNOMED PASS-THROUGH PROVISIONS

The following provisions apply with respect to the software and content ("SNOMED") provided to the Client by the College of American Pathologists ("CAP").

1. Copyright and Trademark Ownership. Client acknowledges that CAP owns and shall retain ownership of the copyright in and trademark of SNOMED. Client shall not take any action adverse to the CAP's rights in the trademark "SNOMED" and shall not apply for any trademark or service mark registrations for the title of Client's product(s) or services that includes the trademark "SNOMED".

2. Notices and Acknowledgments. Client shall identify in informational materials that SNOMED contains SNOMED® International. In addition, Client shall include the following notice of copyright and acknowledgment on SNOMED and any associated materials that include portions of SNOMED or references to CAP or SNOMED, including advertising and promotional materials: "**This product incorporates SNOMED® International --The Systematized Nomenclature of Medicine, used by permission of the College of American Pathologists. © 200_ College of American Pathologists. SNOMED is a registered trademark of the College of American Pathologists, all rights reserved."** The year of first publication of the latest update of SNOMED shall be included as the year specified in the above acknowledgement.

3. FAR/DFAR Regulations. With respect to products provided to United States government entities, the following applies:

This product includes commercial technical data and/or computer data bases developed exclusively at private expense by SNOMED International, a division of the College of American Pathologists with offices at 325 Waukegan Road, Northfield, Illinois 60093-2750. U.S. Government rights to use, modify, reproduce, release, perform, display, or disclose these technical data and/or computer data bases are subject to the limited rights restrictions of DFARS 252.227-7015(b)(2) (June 1995) for U.S. Department of Defense procurements and the limited rights restrictions of FAR 52.227-14 (June 1987), and any applicable agency FAR Supplements, for non-Department of Defense Federal procurements.

4. FEES. In consideration of the rights granted herein, Client shall pay the fees specified in Client's agreement with reseller.

HEALTH LANGUAGE, INC. PASS-THROUGH PROVISIONS

1 **SUBLICENSE**. Health Language, Inc. (HLI) hereby grants a limited nonexclusive and nontransferable sublicense for certain HLI Technology through the Sublicensor to the end-user Sublicensee to use the certain HLI Technology solely with the EHR System as set forth in the written agreement between Sublicensor and Sublicensee (“EHR Agreement”). Sublicensee acknowledges that HLI owns the HLI Technology subject to the sublicense.

2 **PROTECTIONS AND NONDISCLOSURE**. Sublicensee agrees that it shall protect all Intellectual properties in the HLI Technology, including without limitation, patents, copyrights, and trade secrets. Further, Sublicensee shall not disclose any HLI Technology to any third parties, nor reverse engineer any HLI Technology.

3 **WARRANTY DISCLAIMER.** HLI MAKES THE FOLLOWING DISCLAIMERS. SUBLICENSORS WARRANTIES ARE AS SET FORTH IN THE EHR AGREEMENT. ANY USE BY SUBLICENSEE OF THE HLI TECHNOLOGY IS AT SUBLICENSEE'S OWN RISK. THE HLI TECHNOLOGY IS PROVIDED FOR USE "AS IS" WITHOUT WARRANTY OF ANY KIND. TO THE MAXIMUM EXTENT PERMITTED BY LAW, HEALTH LANGUAGE, INC. AND ITS SUPPLIERS (AS USED IN THIS SUBLICENSE “SUPPLIERS” EXCLDES CERNER CORPORATION) DISCLAIM ALL WARRANTIES OF ANY KIND, EXPRESS, STATUTORY OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONNINFRINGEMENT.

4 **LIMITATION OF LIABILITY.** IN NO EVENT SHALL HEALTH LANGUAGE, INC. OR ITS SUPPLIERS HAVE ANY LIABILITY FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES IN ANY WAY ARISING OUT OF THE USE OR INABILITY TO USE ANY PRODUCT AND HOWEVER CAUSED AND UNDER ANY THEORY OF LIABILITY, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR LOSS OF DATA, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL HLI'S CUMULATIVE LIABILITY ARISING OUT OF THIS SUBLICENSE EXCEED THE AMOUNTS ACTUALLY PAID BY SUBLICENSEE TO SUBLICENSOR OR HLI PURSUANT TO THIS SUBLICENSE.

Mortara Warranty Statement

This Agreement is the entire agreement between you, the End User and Mortara Instrument, Inc. (hereinafter referred to as "Mortara") relating to the Mortara products (hereinafter referred to as the "Products"). The terms of this Agreement shall prevail over any conflicting or additional terms of any order, acknowledgement, click-through agreement, or similar communication between the parties during the term of this Agreement. No modification to this Agreement will be binding, unless in writing and signed on paper by a duly authorized representative of each party.

IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, DO NOT USE THE PRODUCTS. PROMPTLY RETURN THEM TO MORTARA.

Mortara hereby warrants that Products, excluding the Stress and Holter products shall be free from defects in material and workmanship under normal use, service and maintenance for a period of twenty-four (24) months from the date of installation of such Product from Mortara or an authorized distributor or representative of Mortara. Stress and Holter products shall have a warranty period of twelve (12) months from such date of installation. Normal use, service and maintenance mean operation and maintenance in accordance with appropriate instructions and/or information guides. This Warranty does not apply to damage to the Products caused by any or all of the following circumstances or conditions:

(a) Freight damage;

(b) Parts and/or accessories of the Products not obtained from or approved by Mortara;

(c) Misapplication, misuse, abuse and/or failure to follow the Product instructions sheets and/or information guides;

(d) Accident or disaster affecting the Products;

(e) Alternations or modifications to the Products not authorized by Mortara.

AS TO MORTARA, THE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT WITHOUT CHARGE FOR MATERIALS, OF ANY PRODUCTS FOUND UPON EXAMINATION BY MORTARA TO HAVE BEEN DEFECTIVE. ALL LABOR CHARGES INCURRED FOR THE REPAIR OF PRODUCTS WITHIN THE WARRANTY PERIOD ARE THE SOLE RESPONSIBILITY OF MORTARA This remedy shall be conditioned upon receipt of notice by Mortara of any alleged defects after discovery thereof within the warranty period. Mortara's obligations under the foregoing warranty will further be conditioned upon the assumption by the C of the Products (i) of all carrier charges with respect to any Products returned to Mortara's principal place of business or any other place as specifically designated by Mortara or an authorized distributor or representative of Mortara, and (ii) all risk of loss in transit. It is expressly agreed that the liability of Mortara is limited and that Mortara does not function as an insurer.

Title and Completeness. Mortara warrants that it has clean, marketable and unencumbered title to all Products.

Non-Infringement Warranty. Mortara warrants that the Products and End User's use of the Products in accordance with the documentation will not constitute an infringement or other violation of any patent, trademark, copyright, trade secret or other property right. Mortara will indemnify, defend, and hold harmless the End User Indemnitees from and against all Damages arising out of any claim that the Product(s) or use of the Product(s) constitutes an infringement of any patent, trademark or copyright of any country or the misappropriation of any trade secret or other property right. If an injunction is obtained against End Users use of the Products by reason of an infringement, as to Mortara, the End User's sole and exclusive remedy shall be, at the expense of Mortara, either to (a) procure for End User the right to continue using the Products; (b) replace or modify the Products with Products of substantially equivalent functionality so that they become non-infringing; or at the option of End User (c) to grant the End User a refund for the infringing Products.

EXCLUDED FROM THE LIMITED WARRANTIES SET FORTH ABOVE ARE CONSUMABLE ITEMS SUCH AS PAPER, BATTERIES, ELECTRODES, PATIENT CABLES, LEAD WIRES AND MAGNETIC STORAGE MEDIUMS.

EXCEPT FOR MORTARA'S INDEMNIFICATION OBLIGATIONS, IN NO EVENT, INCLUDING THE CLAIM FOR NEGLIGENCE, SHALL MORTARA BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, OR FOR ANY OTHER LOSS, DAMAGE OR EXPENSE OF ANY KIND, INCLUDING LOSS OF PROFITS, WHETHER UNDER TORT, NEGLIGENCE OR STRICT LIABILITY THEORIES OF LAW, OR OTHERWISE. THE WARRANTIES ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Indemnification. Mortara will indemnify, defend, and hold harmless End User and its directors, officers, agents, employees and licensees (each, an “End User Indemnitee”) from and against all claims, damages, costs, expenses, fees incurred by End User as a result of intellectual property infringement by Mortara and reasonable attorney fees (collectively "Damages") arising out of a claim by a third party against an End User Indemnitee for (i) injury to persons or loss or damage to property to the extent resulting from any intentional or negligent act or omission of Mortara, and (ii) violations of applicable laws by Mortara.

PASS-THROUGH PROVISIONS – MULTUM

With respect to the proprietary drug information service (for purposes of this particular attachment only, the "Service") provided to Client by Multum, the following provisions shall apply:

Client may use the service only in connection with EHR System as set forth in the Electronic Health Records System and Services Agreement between Client and Cerner ("EHR Agreement"). Every effort has been made to ensure that the information provided in the Service is accurate, up-to-date, and complete, but no guarantee is made to that effect. In addition, the drug information contained herein may be time sensitive. The Service is intended for use by consumers in the United States.
The Service does not endorse drugs, diagnose patients, or recommend therapy. The Service is an informational resource designed to assist licensed healthcare practitioners in caring for their patients; however, it is not a substitute for the care provided by licensed healthcare practitioners. The absence of a warning for a given drug or drug combination in no way should be construed to indicate that the drug or drug combination is safe, effective or appropriate for any given patient. Multum does not assume any responsibility for any aspect of healthcare administered with the aid of information the Service provides.

Disclaimer of Warranties

EXCEPT AS OTHERWISE SET FORTH IN THE EHR AGREEMENT, CLIENT ACKNOWLEDGES THAT THE SERVICE IS PROVIDED ON AN "AS IS" BASIS. EXCEPT FOR WARRANTIES WHICH MAY NOT BE DISCLAIMED AS A MATTER OF LAW, MULTUM MAKES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO REPRESENTATIONS OR WARRANTIES REGARDING THE ACCURACY OR NATURE OF THE CONTENT OF THE SERVICE, WARRANTIES OF TITLE, NONINFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
IN ADDITION, WITHOUT LIMITING THE FOREGOING, THE SERVICE HAS BEEN DESIGNED FOR USE IN THE UNITED STATES ONLY AND COVERS THE DRUG PRODUCTS USED IN PRACTICE IN THE UNITED STATES. MULTUM PROVIDES NO CLINICAL INFORMATION OR CHECKS FOR DRUGS NOT AVAILABLE FOR SALE IN THE UNITED STATES AND CLINICAL PRACTICE PATTERNS OUTSIDE THE UNITED STATES MAY DIFFER SUBSTANTIALLY FROM INFORMATION SUPPLIED BY THE SERVICE. MULTUM DOES NOT WARRANT THAT USES OUTSIDE THE UNITED STATES ARE APPROPRIATE.

Client acknowledges that updates to the Service are at the sole discretion of Multum. Multum makes no representations or warranties whatsoever, express or implied, with respect to the compatibility of the Service, or future releases thereof, with any computer hardware or software, nor does Multum represent or warrant the continuity of the features or the facilities provided by or through the Service as between various releases thereof.

Assumption of Risk, Disclaimer of Liability, Indemnity

EXCEPT AS OTHERWISE SET FORTH IN THE EHR AGREEMENT, CLIENT ASSUMES ALL RISK FOR SELECTION AND USE OF THE SERVICE AND CONTENT PROVIDED THEREON. MULTUM SHALL NOT BE RESPONSIBLE FOR ANY ERRORS, MISSTATEMENTS, INACCURACIES OR OMISSIONS REGARDING CONTENT DELIVERED THROUGH THE SERVICE OR ANY DELAYS IN OR INTERRUPTIONS OF SUCH DELIVERY.

CLIENT ACKNOWLEDGES THAT MULTUM: (A) HAS NO CONTROL OF OR RESPONSIBILITY FOR THE CLIENT'S USE OF THE SERVICE OR CONTENT PROVIDED THEREON, (B) HAS NO KNOWLEDGE OF THE SPECIFIC OR UNIQUE CIRCUMSTANCES UNDER WHICH THE SERVICE OR CONTENT PROVIDED THEREON MAY BE USED BY THE CLIENT, (C) UNDERTAKES NO OBLIGATION TO SUPPLEMENT OR UPDATE CONTENT OF THE SERVICE, AND (D) HAS NO LIABILITY TO ANY PERSON FOR ANY DATA OR INFORMATION INPUT ON THE SERVICE BY THE CLIENT TO THE SERVICE.

MULTUM SHALL NOT BE LIABLE TO ANY PERSON (INCLUDING BUT NOT LIMITED TO CLIENT AND PERSONS TREATED BY OR ON BEHALF OF CLIENT) FOR, DAMAGES OR OTHER LOSSES (COLLECTIVELY, "LOSSES") ARISING OUT OF OR RELATING TO (A) CLIENT'S USE OF THE SERVICE OR CONTENT PROVIDED THEREON AND (B) ANY DATA OR INFORMATION INPUT ON THE SERVICE BY ANY PERSON OR ENTITY OTHER THAN MULTUM, IN ALL CASES INCLUDING BUT NOT LIMITED TO LOSSES FOR TORT, PERSONAL INJURY, MEDICAL MALPRACTICE OR PRODUCT LIABILITY. FURTHER, WITHOUT LIMITING THE FOREGOING, IN NO EVENT SHALL MULTUM BE LIABLE FOR ANY DIRECT, EXEMPLARY, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES, INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, OR DOWN TIME, EVEN IF MULTUM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE INFORMATION CONTAINED WITHIN THE SERVICE IS INTENDED FOR USE ONLY BY PHYSICIANS AND OTHER HEALTHCARE PROFESSIONALS WHO SHOULD RELY ON THEIR CLINICAL DISCRETION AND JUDGMENT IN DIAGNOSIS AND TREATMENT. AS BETWEEN CLIENT AND MULTUM, THE CLIENT HEREBY ASSUMES FULL RESPONSIBILITY FOR INSURING THE APPROPRIATENESS OF USING AND RELYING UPON THE INFORMATION IN VIEW OF ALL ATTENDANT CIRCUMSTANCES, INDICATIONS, AND CONTRAINDICATIONS.

MULTUM PASS-THROUGH PROVISIONS

Multum's total liabilities in connection with this agreement, whether arising under contract or otherwise, are limited to the fees received by Multum under this agreement specifically relating to the Client's service or product which is the subject of the claim.

PASS THROUGH PROVISIONS—Rehabilitation Institute of Chicago (RIC)

The following terms apply to the Rehabilitation Content (both inpatient and outpatient):

- Customer and its affiliates shall only use the RIC Content with the EHR System as set forth in the Electronic Health Records System and Services Agreement by and between Customer and Cerner (EHR Agreement").
- Except as set forth in the EHR Agreement, Customer expressly acknowledges that: (i) it shall not have the right to manufacture, sell, or otherwise commercially exploit the RIC Content; and (ii) Customer may not copy, modify the RIC Content or allow others to do so; nor shall Customer alter, change, or remove from the RIC Content any identifications, including without limitation trademark and copyright notices. Customer shall have and acquire no rights in or to intellectual property rights of RIC, or any right to use the same, except as may be expressly permitted hereunder, by the EHR Agreement, or with the written permission of RIC. Customer shall not recreate the rehab content in whole or in part during or after any license period. This restriction shall survive termination of the agreement.
- Except as set forth in the EHR Agreement, Customer shall hold the RIC Content in strict confidence and not disclose them to any third party.
- Customer shall comply with all applicable laws and regulations and any written and electronic instructions for use. RIC reserves the right to terminate this license if RIC determines that use of the RIC Content is not in accordance with this Agreement.
- THE RIC CONTENT AND ANY OTHER SERVICES PROVIDED BY RIC ARE PROVIDED TO CUSTOMER "AS IS", AND RIC EXPRESSLY DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY AS TO ANY ASPECTS OF THE RIC CONTENT, INCLUDING WARRANTIES OF NONINFRNIGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- RIC SHALL NOT BE LIABLE TO THE CUSTOMER FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES EVEN IF AWARE OF THE POSSIBILITY OF SUCH DAMAGES ARISING.
- Customer aggress and acknowledges that RIC is not providing medical advice or treatment, and that the content and/or data included in the product is not intended to supersede or replace the end users' independent medical judgment;
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- Except as set forth in the EHR Agreement, Customer agrees that during the term of this Agreement and for a period of one (1) year following its termination, Customer shall not solicit, recruit, employ or engage, either directly or indirectly, as an employee, independent contractor, consultant, subcontractor or otherwise, any employee of RIC, without RIC's prior written consent. If this provision is violated, Customer shall immediately notify RIC and pay RIC an amount equal to one year's salary for that individual.
- Customer shall not use RIC's name, logo or marks in any manner whatsoever, without RIC's prior written consent.
- RIC shall be a third party beneficiary of these terms.

Mpages Limited Use Runtime License

Client acknowledges and agrees that Cerner grants Client a limited runtime only license to MPages for the sole purpose of executing MPage Applications that have been Cerner Developed and/or Cerner Certified. MPage Applications are not included with this runtime license and must be purchased separately. Client is not licensed or authorized to create or execute MPage Applications beyond those that have been Cerner Developed and/or Cerner Certified. Furthermore, Client is not authorized to modify the source code of any MPage Applications without upgrading to the MPages Full Use license.

Definition of Terms

MPage Application means a CCL/web technology based program that leverages the MPages code set for execution.

Cerner Developed means an MPage Application that was purchased from Cerner or developed by Cerner professional services.

Cerner Certified means an MPage Application that has been certified by Cerner.

PASS-THROUGH PROVISIONS
BROWERSOFT, INC.

SOFTWARE SUPPORT AGREEMENT

1. TERM

1.1. THIS SUPPORT AGREEMENT IS EFFECTIVE FOR AN INTIAL TERM OF ONE YEAR, BEGINNING ON THE DATE OF FIRST PRODUCTIVE USE OF THE SOFTWARE HEREOF (the "SUPPORT EFFECTIVE DATE") AND SHALL AUTOMATICALLY RENEW FOR SUBSEQUENT ONE YEAR TERMS UNLESS NOTICE OF NON-RENEWAL IS SENT BY ONE PARTY TO THE OTHER NOT LESS THAN SIXTY (60) DAYS PRIOR TO THE APPLICABLE ANNIVERSARY OF THE SUPPORT EFFECTIVE DATE. This Support Agreement only applies to Client's use of the Software licensed by Browsersoft Inc to the Client, pursuant to a current support agreement between Browsersoft, Inc. and Client.

2. CHARGES/PAYMENT

2.1. Client shall pay the Quarterly support charge on the Support Effective Date of this Support Agreement and each anniversary thereafter during the term ("Maintenance Fees"). Browsersoft reserves the right to increase the Maintenance Fees provided for herein on an annual basis by delivery of written notice to Client. Client shall pay all taxes or duties levied in connection with this support Agreement, except those based on Browsersoft's net income.

3. SERVICE REINSTATEMENT

3.1. In the event this Support Agreement is allowed to lapse (other than for breach by Browsersoft) and is later renewed, Client shall be required to pay back charges for all months that the Support Agreement has lapsed. Client may be responsible for expenses incurred to inspect hardware or reload software to the current release version after any lapse in maintenance.

4. SERVICES PROVIDED

4.1. Subject to the terms and conditions of this Support Agreement, Browsersoft shall provide standard maintenance services to Client for the Licensed Software, including modules and components. For purposes of this Support Agreement, "standard maintenance services" shall include efforts to repair or provide a patch or work around for all Program errors that Browsersoft is able to reproduce. Standard maintenance services shall also include providing all new releases, updates, changes, error corrections, fixes, patches, and work-arounds ("Updates"), including those modifications or enhancements made to the Licensed Software as required to comply with federal laws and regulations.

5. TECHNICAL CONSULTATION

5.1. Service Contracts

5.1.1. Browsersoft provides two-levels of support services based on the needs of the Client. "Platinum Service" provides 24 x 7 x 365 support with a two-hour response time. Browsersoft's "Gold Service" provides business hour support from 8 AM to 6 PM Central time Monday - Friday with a two-hour response commitment.

5.1.2. Annual support costs are applicable only after the identified components are in production use.

5.2. Priority Levels

5.2.1. Client may request and Browsersoft shall provide technical consultation by telephone during contracted support hours. Browsersoft shall maintain a log of technical consultation requests in a tracking system, with a unique number assigned to Client's requests. Browsersoft shall provide this unique number to the Client for reference and future communications. Browsersoft will assign reported reproducible problems one of three levels of priority:

5.2.2. Priority 1 is the most severe program error and represents a situation where all features and functions of the Licensed Software are unavailable and no practical alternate mode of operation is available. Priority 1 problems are worked on immediately and continuously until the problem is resolved or a fix or work-around acceptable to the Client is implemented.

5.2.3. Priority 2 indicates a problem in which major features and functionality are not available and no practical alternate mode of operation is available. In this instance, the request is assigned to the next available technician.

5.2.4. Priority 3 indicates a problem where normal features and functionality remain functional. At this level, requests are worked in the order in which they are received.

5.3. Problem Resolution

5.3.1. Priority 1 and 2 problem solutions will be sent to the Client as soon as available. Priority 3 problem solutions are made available in subsequent major or minor releases of the License Software. Priority 3 solutions are provided only for the current release level of the Licensed Software.

5.4. Service Location

5.4.1. Browsersoft shall provide technical consultation from its business premises, except that Browsersoft, at its own discretion and expense, may dispatch a technical services representative to Client's facility for all program errors that Browsersoft is unable to correct by providing technical consultation from Browsersoft's premises. If Browsersoft personnel perform such travel and it is determined that the cause of the malfunction was Client or user error, negligence or software or hardware not provided by Browsersoft, Client will be responsible for paying the labor costs at Browsersoft's then standard rates and shall reimburse Browsersoft for all reasonable travel and living expenses incurred.

UPDATES

6.1. During the Term of this Support Agreement, Browsersoft shall make all Updates available to Client. Browsersoft reserves the right to determine the content and availability of all software, including without limitation, Updates. For purposes or clarification, the Parties agree that Updates shall not include new features that are offered by Browsersoft as separate modules or software packages for a separate fee. Interface services provided under this Support Agreement are designed to keep the application in good working order and comply with interface specifications agreed to by Browsersoft and Client. Documentation updates shall generally be distributed to Client with each Update. All Updates may be loaded only based upon instructions provided by Browsersoft Client Services personnel. Browsersoft must be notified, in writing, before the loading of operating system software updates, third party software updates or installing new hardware to the System. Browsersoft shall assist Clients making Updates by telephone during normal business hours.

7. EXCLUSIONS

7.1. The following items are not covered by this Support Agreement but may be obtained from Browsersoft for additional fees:

7.1.1. Custom programs developed by Browsersoft for Client which are not included in general releases to the Licensed Software;

7.1.2. Custom programs developed by Client using system tools or commercially available software programs;

7.1.3. Additional hardware that may be required to operate Licensed Software enhancements at an acceptable performance level;

7.1.4. Malfunctions caused by Client or user error or negligence;

7.1.5. Annual update fees, if any, for third party software Licenses or Sublicensed Software not included in the Licensed Software. The software publisher or equipment manufacturer may charge such fees to the Client. All associated installation charges for updates to third party software or Sublicensed Software shall be the responsibility of Client;

7.1.6. Travel and living expenses incurred by Browsersoft employees in conjunction with performing non-standard Browsersoft services;

7.1.7. Software products not shown in the Schedule of Licensed Software;

7.1.8. Any major releases related to the operating system and database software;

7.1.9. Data restoration and/or data migration; and

7.1.10. Support for a release of the Licensed Software that is not the then-current or immediately preceding release.

7.2. Although Browsersoft may assist Client from time to time by answering questions or providing information regarding IT administration, preventative maintenance and operating systems, such services are outside the scope of this Support Agreement.

8. CLIENT PARTICIPATION

8.1. Browsersoft obligations are conditioned on Client fulfilling its obligations hereunder, including, without limitation:

8.1.1. Providing Browsersoft with all information and assistance necessary to detect, simulate/reproduce, and correct any Program Errors.

8.1.2. Providing Browsersoft access to the System and its related operating environment, including without limitation access to the system and the Licensed Software for the purpose of providing all Browsersoft services and confirming compliance with the terms and conditions of this Support Agreement; providing a suitable physical environment including but not limited to, heat, light, ventilation, air conditioning, proper electrical power and grounding.

8.1.3. Procuring, installation and maintenance of all non-Browsersoft communications media, including, but not limited to, a telephone within operational reach of the central installation site for diagnostic purposes and telephone equipment and lines for remote transmission of information.

8.1.4. Causing all equipment and facilities that are used in connection with the operation or security of the Licensed Software and System to be maintained properly and in good operating condition as specified by the applicable manufacturer. All charges for such media and services shall be the sole responsibility of Client.

8.1.5. Installing Licensed Software Updates within ninety (90) days of their release. Browsersoft has no obligation to support more than two (2) versions of the Licensed Software; therefore, Client must use the then-current or immediately preceding release.

8.1.6. Maintaining regular back-ups of data files, application code and operating system software.

8.1.7. If, upon Client's request, Browsersoft personnel travel to Client's site to perform any support services (other than those set forth in Section 5.3) Client shall pay for such personnel at Browsersoft then standard rates and shall reimburse Browsersoft for all reasonable travel and living expenses incurred in accordance with Client's Travel Reimbursement Guidelines.

8.1.8. Providing Browsersoft at least sixty (60) days prior written notice of its intention to relocate the central site, or any portion thereof, from the site set forth in the Arrangement Letter. Such approval shall not be unreasonably withheld if otherwise permitted by the License Agreement.

Strict compliance with the terms and conditions of the Agreement, including without limitation, the terms and restrictions on the license grant.